

Implementing Web Services- based Applications: A Discussion

Presented by Jim Farmer
at
The XML Forum Meeting
Monday, February 10, 2003
at the University of California, San Francisco

Publisher's Note

The discussion focused on the eTranscript projects of the California Community Colleges, Florida's FACTS, and the plans of the University of Texas Austin EDI Server. The objective was convergence of the data standards now in use.

Because of limited time, only the slides on the California Community Colleges' eTranscript project were used during the luncheon discussion.

The entire presentation is reproduced here for those who are interested in the Web-services projects.

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Overview

- JA-SIG
- Web Services as an architecture
- Key Web Services projects
- California eTranscript
- Meteor Prototype and Initial Production
- Meteor Production for Financial Aid Professionals
- Emerging Enterprise Architecture
- Observations

JA-SIG

- Java In Administration
Special Interest Group
 - www.ja-sig.org
- Conferences biannually
- Clearing house
 - <https://www.mis4.udel.edu/JasigCH/>
- Collaborative projects

Goals

The JA-SIG's goals are to:

Nurture communication of best practices, new technologies, and innovative methodologies and projects related to Java

Increase peer review, collaboration, and group discussion related to institution-developed Java administrative applications

Broaden Java technology cross-fertilization between firms and schools on both a functional and geographic basis

JA-SIG Activities

- **Conferences**
 - Annual conferences
 - Winter – Java Technology
 - Summer – uPortal
 - United Kingdom – JA-SIG UK
 - Europe – Portals Europe
 - Technology Training program (in conjunction with the annual conferences in North America)
- **Participant Projects**
- **Collaborative facilities**
 - Developers list
 - Portal list
 - Web site
- **The JA-SIG Clearinghouse - a place on the Web to facilitate the sharing of Java components.**

The uPortal Project Begins


“Every college and university has **two very valuable assets: identity/brand** – e.g., Boston College name – **and loyal constituents** – e.g., alumni, students, parents, staff, prospective students. These assets need to be protected, and ownership and control of the institutional **information portal should not be relinquished to an outside agency**. One reason for reaching this conclusion is the desire to keep the portal **free of commercialism**. However, the more important reason is that the institutional information portal is a key ingredient in the strategic and technical framework to **integrate applications and to customize** the delivery of information to all constituents.”

Bernard W. Gleason, “Institutional Information Portal Key to Web Application Integration,” January 26, 2001

What is uPortal?

- Enterprise portal
- Framework for presenting aggregated content (channels)
- Personalization
- Role-based access control
- Open source, collaborative effort
- Java web application

Columbia University

 **myColumbia** February 11, 2002
Monday, 6:45 AM [home](#) [preferences](#) [channels](#) [logout](#)

Tab 1 Tab 2 Tab 3 Tab 4 Tab 5


user login

User Name:

Password:

Columbia University

Log in as 'demo' with password 'demo' if you do not have a Columbia ID



random quote

"Only two things are infinite, the universe and human stupidity, and I'm not sure about the former."
Albert Einstein

directory lookup

Name: *(use first name first or a UNI)*

Department or Title:

internet search

Columbia:


Google:

Altavista:


Yahoo:

city transit

[NY Traffic Report](#)
[Columbia Shuttle Schedule](#)
[MTA NYC Transit Home](#)
(Subway, Bus Maps & Schedules)
[NJ Transit Schedules](#)
[PATH Schedules](#)
[LIRR](#)

Powered by uPortal v2.0 Copyright, 2000 Columbia University Brought to You By 

Cornell University



[CU NetID Login](#)

Guest Account Login: Username: Password:

[Cornell](#) [Examples](#) [Personal](#)

Today

Tuesday, July 30, 2002

We would often be sorry if our wishes were gratified.
- *Aesop*

Tonight: Johnny Russo and the East Hill Jazz Quintet [info](#)

Ithaca Weather

Ithaca / Tompkins County
Last Update on Jul 30, 8:50 pm EDT


Clear	Humidity:	73 %
	Wind Speed:	Vrbl 5 MPH
	Barometer:	29.96"
	Dewpoint:	65°F (18°C)
	Heat Index:	75°F (24°C)

More Local Wx: [2 Day History](#)

Ithaca Forecast

Directory Search

Enter a Netid or all or part of a name, nickname, campus phone number, email address or primary department in the search field.




Welcome

Welcome to **uPortal.Cornell**, the Enterprise portal for **Cornell University**.

Please login above to access the portal content. Cornell NetID holders should just click the CU NetID Login button to enter; guest users should enter their username and password, and click the other login button.


If you do not have an account, you are invited to login using "demo" as both the username and password.

uPortal version 2 is available through [JA-SIG](#).



CUinfo Browser

- Student Life and Academics
- News and Events
- Computing at Cornell
- Campus Information
- Faculty and Staff
- Ithaca and the Surrounding Community
- Search and Directories



Illinois State University

ILLINOIS STATE UNIVERSITY **iCAMPUS** helping you navigate your way through campus information

[Home] [Layout] Welcome, **jeremy**, you are currently logged in. [Logout](#)

Home Campus Life People Search

Student Information

Course Information:
[Your Class Schedule](#)
[Your Grades](#)
[Your Textbooks](#)

Check Your Status:
[Your Financial Aid Status](#)

Updates:
[Update Your Address](#)
[Confirm Your Attendance](#)
[Change Your PIN #](#)

Reminders

- Welcome Preview Students!
- July 30th, Last Day to Confirm Attendance
- August 9th, Summer Classes End
- August 15-18th, Passages
- August 19th, Fall Classes Begin
- March 1st, 2003, Financial Aid Application due for year 2003-2004

Redbird Card

[View Plan Balance\(s\)](#)
[Report Card as Lost or Found](#)

Additional Card Information:
[Locations accepting the Redbird Card \(PDF\)](#)
[Card account information](#)

Personal Calendar

Thursday, June 20, 2002

Jun 02

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

ULID Services

Your password expires in **59 days**.

[Change Your Password](#)
[E-Mail Forwarding Request](#)
[Vacation Auto Reply Request](#)

Universidad de Lima



¡Bienvenido a Mi ULima!

Martes, Julio 30, 2002 09:05 PM

VERSION BETA

Principal

Ingresar

Usuario:

Contraseña:

Ingreso

Acerca de Mi ULima

- [¿Cómo personalizar mi ULima?](#)
- [¿Qué es el Aula Virtual?](#)
- [Normas de Uso de Mi ULima](#)
- [Usuarios](#)
- [Requerimientos del Sistema](#)
- [Contraseña](#)

Presentación



Mi ULima es el portal que la Universidad de Lima ha desarrollado para toda la comunidad universitaria. Tiene como objetivo proporcionar eficientemente una completa gama de servicios e información, buscando en todo momento colaborar con las actividades e intereses tanto de la comunidad universitaria como de los visitantes interesados en la Institución.

En Mi ULima encontrarás información sobre tu record académico, cuenta corriente, matrícula y cursos. También podrás acceder a servicios como Biblioteca, práctica y empleo, aulas virtuales, áreas de discusión, agendas y directorios, entre otros.

El portal está diseñado especialmente para los miembros de la comunidad a la que atiende. Bastará con que ingreses tu usuario y contraseña y Mi ULima te mostrará toda la información relevante a tus necesidades. El Portal se adaptará automáticamente a tu condición académica, las actividades que realizas, el momento del ciclo en el que estamos o la configuración personalizada que hayas elegido.

im+m uPortal Test Site

im+m | **im+m Info** | **Developers** | **eResources** | **eTranscript**

Software Developer's News Briefs

for higher education software engineers and analysts

- OASIS Members Form Technical Committee for Web Services Reliable Messaging.**
February 13, 2003 Alexandria, Virginia::OASIS announced a new Web Services Reliable Messaging Technical Committee. Beginning with the WS-Reliability standard developed by Sun Microsystems and others, this is the key remaining standard for SOAP-based transaction processing. The open model ensures reliable message delivery for Web services. The royalty-free technical specification will address issues of message persistence, message acknowledgement and resending, elimination of duplicate messages, ordered delivery of messages, and delivery status awareness for sender and receiver applications.
- NCHHELP CommonLine XML "End Result" Decision Boosts XSLT interoperability**
Feb 10, 2003 San Francisco::At the XML Forum meeting, NCHHELP representative Tim Cameron reported the student loan community will be moving from a single data element transaction-oriented change process to an "end result" format where all of the changes are contained in a single XML document. This decision means change data can now be processed using standard XML document and content management systems and can be selected and presented using XSL transformations. Industry standard portals, such as JA-SIG's uPortal, will be able to use the new format without extensive database accesses and special programming.--The CommonLine XML standards are being developed as an activity of the National Council of Higher Education's (NCHHELP) Electronic Standards Committee. The "end result" format is described in ESC's October 31, 2002 CommonLine Reengineering Proposal.
- Swedish Universities form uPortal Club**
Jan 30, 2003 Uppsala, Sweden::Four Swedish universities formed a "uPortal club" in Sweden to share expertise and experience implementing academic portal from JA-SIG. At the CodeX Enterprise Directory Services Conference EDS 2003 in Uppsala, the University of Stockholm University of Umea, Linköping University, and Chalmers University announced plans to implement a common authorization framework for uPortal. The project will use SPCOP (Simple Policy Control Project) technology.

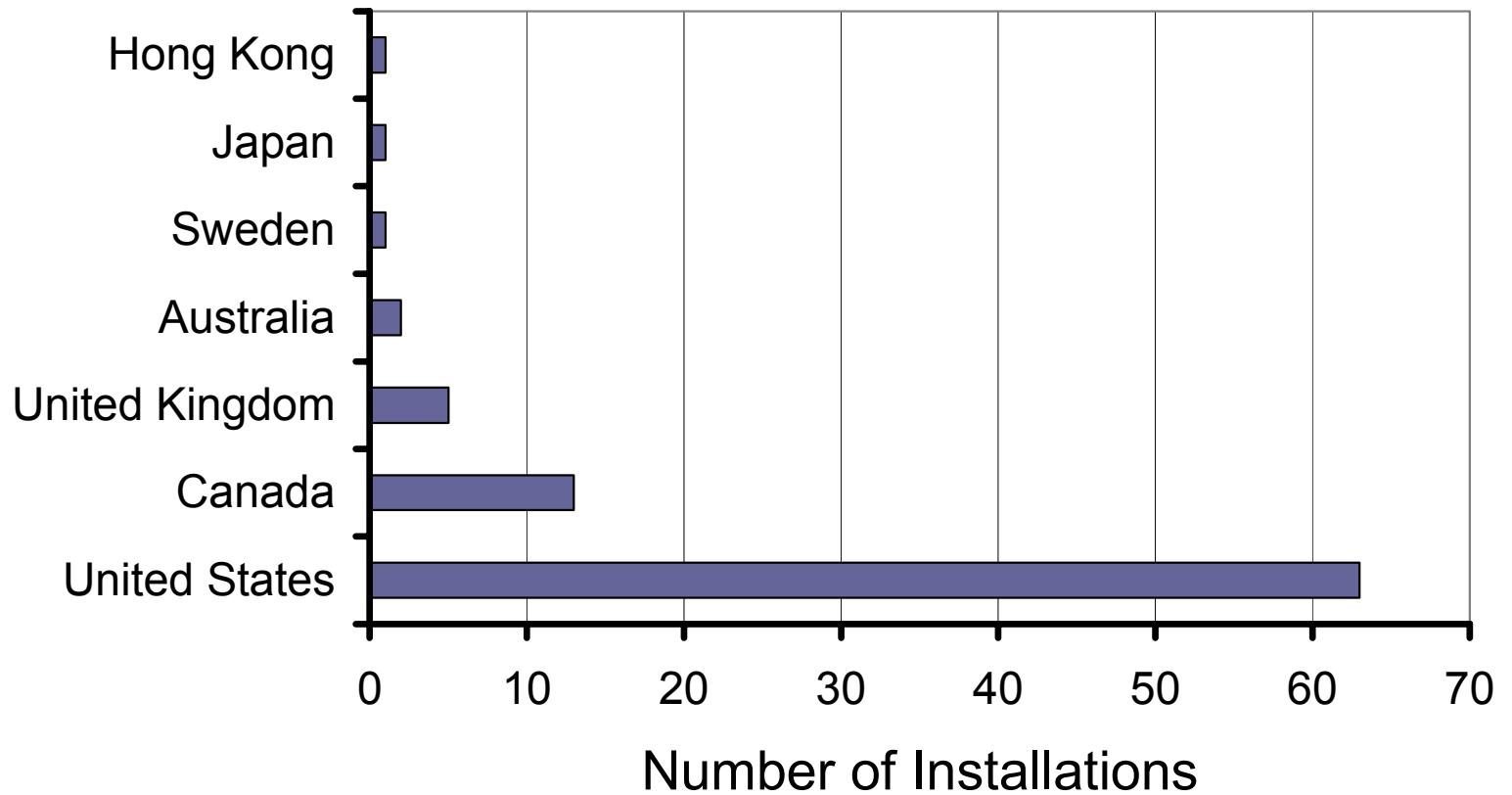
CETIS UK News Feed

News from the Centre For Educational Technology Interoperability Standards.

- IMS Learning Design a full specification**
Wilbert Kraan, CETIS staff
After a fairly smooth period as a public draft, IMS Learning Design has now been accepted as a full specification by a 94% majority of IMS members. In a sense, the real deal starts now, as the specification is now stable enough for the vendors to develop.
- Northern Ireland students will 'access the data they need, when they need it'**
Wilbert Kraan, CETIS staff
The Northern Ireland Integrated Learning Environment (NIIMLE) project has just been formally presented at a well received launch. The idea is to provide all FE and HE students in the region with a single, secure access point for all study information from whichever FE or HE institution they are at, have been to, or might go to in the future.
- SiX plugfest report: encouraging, but could do better**
Wilbert Kraan, CETIS staff
Dutch educational standards working group SiX just published the results of its plugfest. Over the day, various managed/virtual learning environments were required to import, export and display a standardised set of ADL SCORM 1.2, IMS Content packaging 1.3, IMS QTI 1.2 and IMS Enterprise 1.1 data. Result: familiar problems and remarkable differences between products.
- ISO SC36 'Metadata for Learning Resources' working group approved**
Wilbert Kraan, CETIS staff
Following a ballot of its national members, the ISO JTC1 SC36 educational standards body will set up a working group for "Metadata for Learning Resources". But hang on, didn't we already have IEEE's LOM as a standard for data about learning objects? We do, and how IEEE's LOM and ISO's LRM will relate is going to be interesting.
- IEEE to lift SCORM, IMS Content Packaging to standard status, clarifies LOM future.**
Wilbert Kraan, CETIS staff
Though proper standards bodies like IEEE are supposed to be more cautious and slow than specification bodies, IEEE's Learning and Teaching Sub Committee (LTSC) is announcing a raft of new standards and initiatives for 2003. LOM will get new bindings, the Architecture and Reference Model and the gubbins that define SCORM are nearly standards, Competency Definitions and Digital Rights Expression Language are in various stages

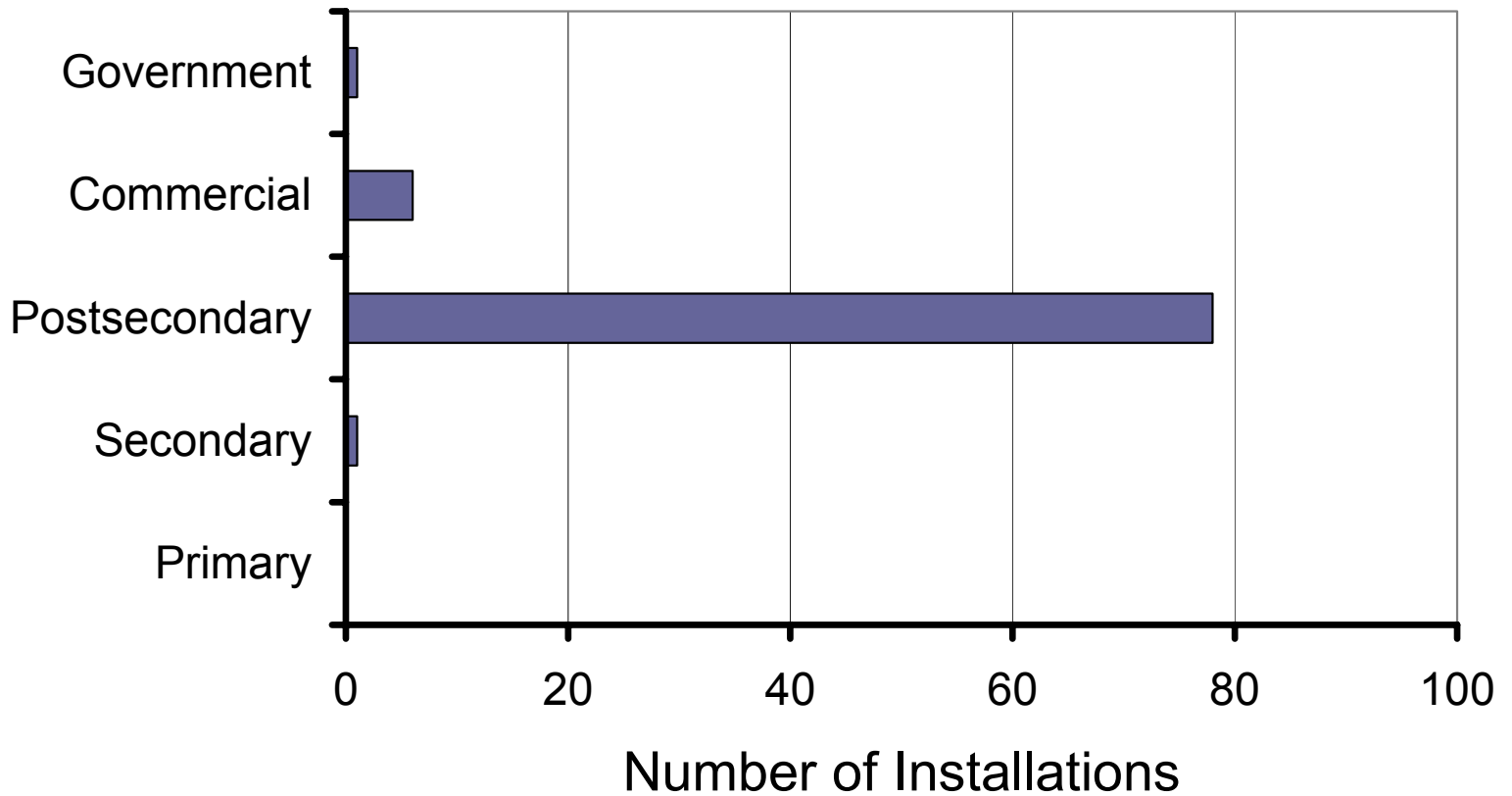
JA-SIG uPortal

Location of uPortal Installations
Preliminary Survey October 2002



JA-SIG uPortal

JA-SIG uPortal Installations
Preliminary Survey October 2002



Some JA-SIG Members

- Boston College
- Princeton
- UBC
- Delaware
- Florida State
- Cornell
- Boston
- Georgetown
- USC
- MIT
- Cal Poly SLO
- Mississippi State
- Brown
- Yale
- Hawaii
- Columbia
- Cornell
- U Washington
- Minnesota
- UT Austin
- + ~300 more...

JA-SIG Participant Projects [1]

- uPortal – University of Delaware*
- Content Management System – Columbia University*
- Library Catalog Access (Z39.50 2001) – Oxford University
- Security: Central Authentication System (CAS) – Yale University
- Security: Athens and Shibboleth – University of Hull
- WSRP (Web Services Remote Portal) Compliance – Interactive Business Solutions and Unicon, Inc.*
- RSS 1.0 + Modules – instructional media + magic, inc.*

JA-SIG Participant Projects [2]

- Meteor Student Loan Information Prototype – National Council of Higher Education Loan Programs
- eTranscript exchange – California community colleges
- eMail – University of British Columbia
- Web proxy – Memorial University of Newfoundland

Note: The projects listed are available as uPortal channels (portlets). Because of open standards, they also can be used by for other standards-compliant portals and, with adaption, installed on traditional Web pages.

This list does not include commercial portlets (channels) for uPortal such as those of Interactive Business Solutions, or products that have been adapted locally.

*Projects contributing to the uPortal framework as well.

JA-SIG, The Reality

- Several hundred programmers working collaboratively at more than 100 colleges and universities on projects important to higher education.
- A community that shares knowledge and experience; resolving problems, sharing design suggestions, and testing and improving each others work.
- IT managers who are working aggressively to make the most effective use of available resources.
- And, with a converging perspective on enterprise architecture, representing a substantial part of higher education in discussions of new and changed systems, especially those that share information in real-time.

JA-SIG, The Future

- Projects, such as uPortal, that advance the use of open-standards as well as serve the colleges and universities.
 - Support of such efforts as WS-Interoperability, Liberty Alliance, W3C and OASIS by implementing the standards at a number of colleges and universities.
 - Make available to developers recommendations on available standards and their applicability to higher education. Coordinate with other groups such as HEKATE.
 - Evolve an enterprise application integration strategy, based on Web services, and demonstrate its feasibility and effectiveness

JA-SIG, The Future

- In conjunction with the Joint Information Systems Committee, implement standards, such as IMS, that facilitate the exchange of learning objects across national boundaries.
- Recognize and encourage the internationalization of software serving higher education.
 - Create an international version of uPortal. (Efforts now underway for Celtic, Chinese, English, French, Japanese, Russian, Spanish, Swedish, Vietnamese, and Welsh).
 - Demonstrate the use of the XLIFF standard in developing multiple-languages portlets (channels).

JA-SIG, The Future

- Encourage the adoption of information technologies that meet the diverse needs of higher education, especially Java, XSLT, and Web Services
 - Continue the JA-SIG NA training program
 - Facilitate the exchange of experience and expertise
 - Demonstrate by example implementation, the effectiveness of these technologies
 - Communicate the experience within the community and to others

*Web services
as an architecture*

Web services defined

“Web services are a set of standards for how systems connect to each other, and communicate information. It’s an extension of a distributed computing framework, which provides an open standard that most software vendors support.”

Chandra Vekatapath
Market Manager, Web Services, IBM Corporation,
TheBusiness Integrator, Second Quarter 2002, pp. 5-11

Value of Web services technology

Open standards Web service projects are taking one-fourth the time and costing one-fifth comparable projects using traditional technology. Performance is 2 to 10 times better than expected.

- HFC Bank - IFX credit card application using XML, SOAP and XSLT
- Deutsche Bank Bauspar - FixML security transaction integration using XML messages and XSL transformations
- Hypo Vereinsbank - Integration

Based on presentations at the
XSLT [Invitational] Conference
Oxford, University, April 8-9, 2001

“Best of Breed” strategy

“With Web services, best of breed becomes more feasible.”

“Web services will make best of breed more cost effective.”

Rick Bergquist, CTO of PeopleSoft
as quoted by Heather Harreld and Mark Jones in
“Chasing suite success,” InfoWorld, Nr. 24, June 17, 2002.

Web services architecture is

- XML “tagged” data content
eXtensible Markup Language
- ebXML/SOAP data transport
Simple Object Access Protocol
- XSL transformations for presentation
eXtensible stylesheet language
and now
- UDDI/WSDL directory services
Universal Description, Discovery, and
Integration, and Web Services Description
Language

A Web service is

- XML business messages
- using ebXML/SOAP compliant data transport
- rendered using XSL transformations
- for a remotely authenticated user

The standards

- Data XML
- Validation Schema
- Transport SOAP (real-time)
SMTP (batch)
- Security SAML
- Description WSDL
- Directory UDDI
- Transformation XSLT

Note: Message content is not defined by any of these standards.

XML “family”

- XHTML
- XLink, XPath, XPointer
- XForms
- XSL, XSLT
- XML Signature, XML Encryption, XML Key Management
- XML Query
- XML Schema
- RDF Metadata

Web Services Standards

Standard	Source	Date Available
SOAP 1.1	W3C Note	8 May 2000
WSDL 1.1	W3C Note	15 Mar 2001
UDDI 2.0	OASIS	19 Jul 2002
WS-Security	OASIS	12 Dec 2002
SAML 1.1	OASIS	31 May 2002
WS-Routing	Microsoft	16 Oct 2001
WS-Reliability	Sun et al	8 Jan 2003

Industry content standards

Industry	Standards
Financial Services Financial Reporting	ebXML compliant IFX XBRL
Student loans Financial aid	CommonLine XML Common Record
Human Resources	HR-XML
Academic Records	PESC and California Community Colleges
Library	(In discussion)

Process content standards

Function	Standard
Work flow	WSFL and WfML
Remote Portlet	WSRP
Presentation	WSUI
Security Assertions Security Access Control	SAML XACML

Web services in higher education

- Digital library search and retrieval (Columbia, Cornell)
- Transcripts (California Community Colleges, Florida, Texas, Arizona, Ohio)
- Student Aid (NCHELP, U.S. Department of Education)
- Security (Internet 2 Shibboleth)
- Remote Portals (JA-SIG)

Defining projects

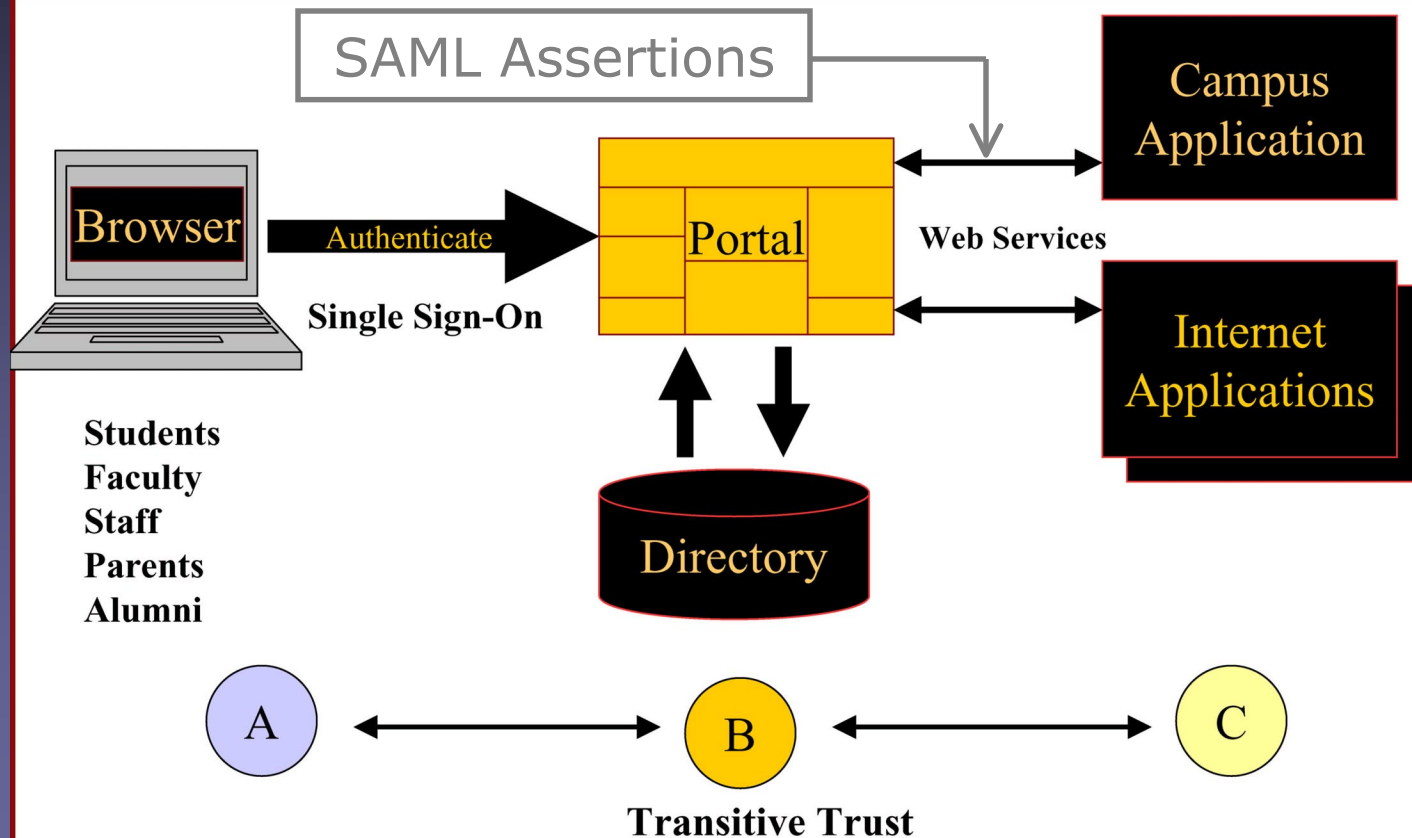
- eTranscript and eAdmissions
 - California Community Colleges
 - Florida FACTS
 - University of Texas, Austin Internet Server
- NCHELP Meteor Financial Aid Information
- IFX Financial Services (infiNet)
- JISC (UK) Inter-system Integration

Gleason's "Transitive Trust"

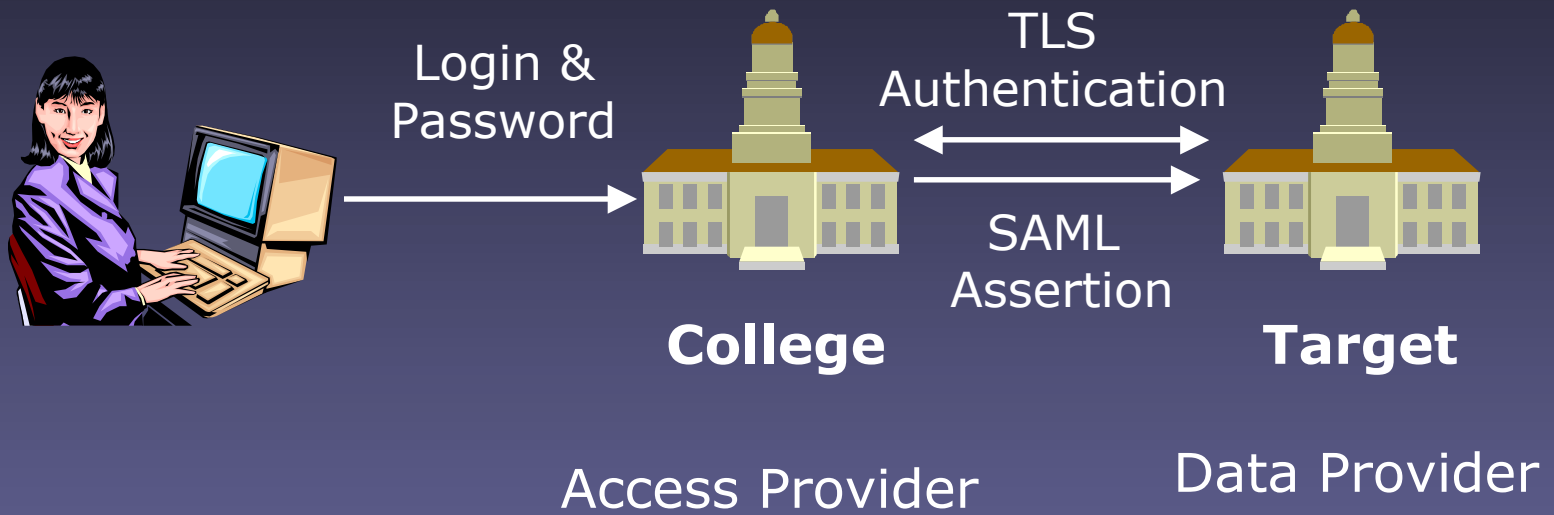


BOSTON COLLEGE

Simple Overview



Authentication and authorization



ebXML Security Profile 3

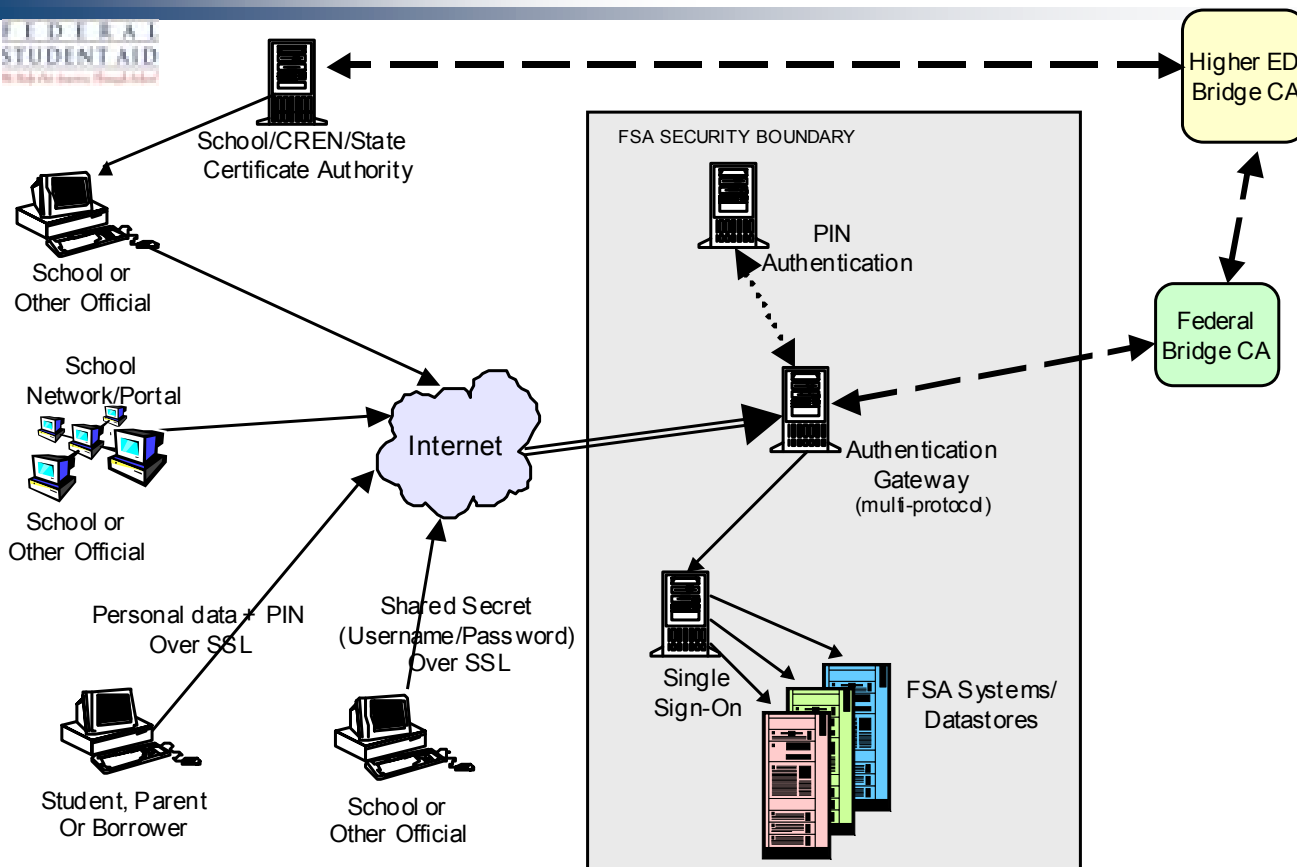
Non-persistent confidentiality and non-persistent authentication

ED/FSA “Transitive Trust”



FEDERAL STUDENT AID

Transitive Trust – Technical Vision

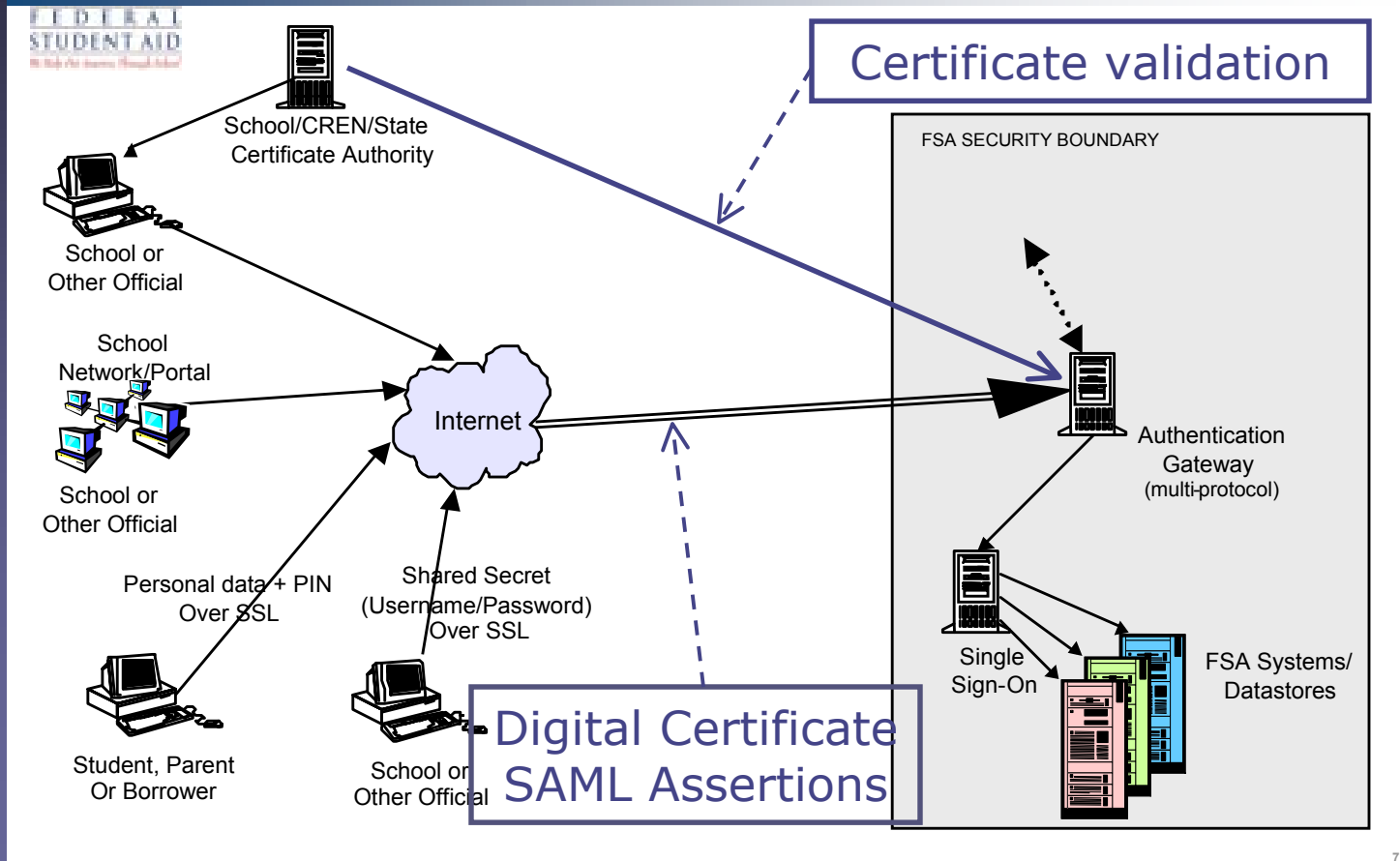


ED/FSA “Transitive Trust”



FEDERAL STUDENT AID

Transitive Trust – Technical Vision



Key Web-Services projects
excerpts from the
Postsecondary Electronic Standards Conference
9-10 May 2002



INTERNET EDI SERVER



Bruce Marton

Sr. Systems Analyst

The University of Texas at Austin



Why build the EDI Server

- Simple yet secure way to send SPEEDE/ ExPRESS transcripts via the Internet
- How to transport

- FTP File transfer protocol
- Email with attachments SMTP protocol
- Value Added Network or the Internet

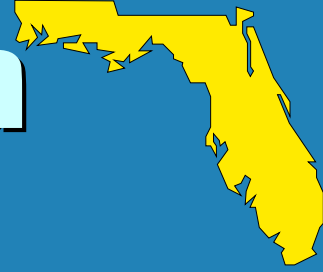
Electronic transcripts exchanged via SPEEDE ANS EDI standard using the Austin EDI Server



National Initiatives

- AACRO support of the server
- International Interest
- XML support

Pioneering of Electronic Standards in Florida



**Postsecondary Electronic
Standards Council**

May 9, 2002

By Tom Stewart

Miami-Dade Community College

Overview of Standards Activity in Florida

- β **Common Paper Transcript**
- β **Common Course Numbering**
- β **FASTER/SPEEDE**
- β **Florida Academic Counseling and Tracking for Students (FACTS)**

FASTER

Florida Automated System for Transferring Educational Records

- β **History of Development in early 1980's**
- β **Proprietary Format (Fixed Length Records)**
- β **One format for Postsecondary**
- β **One format for K-12 to K-12**
- β **One format for Secondary to Postsecondary**
- β **Requests is a feature**

FASTER

β **Decision has been made by the state FASTER committee to continue converting from FASTER format to ANSI ASC X12 (SPEEDE/EXPRESS) format**

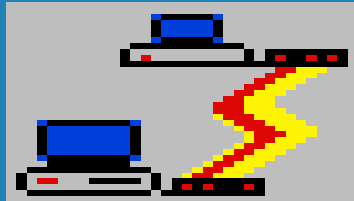
β **No firm target date for this conversion**

Florida Academic Counseling & Tracking for Students (FACTS)

- β **Uses each transfer institution's Degree Audit program**
- β **Accesses each home institution's transcript on-line via EDI with a standard EDI format (not SPEEDE)**

FACTS Transmissions

β



Transcript information sent

in FASTER EDI format

β

Admissions application info sent in XML format

Future FACTS Features

β **Standard XML/HTML Format for all Degree Audit Displays**

Miami University of Ohio has suggested an XML-based degree audit program data exchange to the XML Forum

β **Standard Transient Form**

β **For High School Students**

- **High School Planner**
- **Info on state scholarship programs**
- **Costs to attend each CC and University**
- **Admissions Policies and Procedures**

Electronic Services from a School's Perspective

**PESC Annual Conference on Standards in Higher
Education**

Judith Nemerovski Flink

Director of Student Financial Services (SFS)

University of Illinois at Chicago

May 9, 2002

On-line Web Service Utilization

One of the primary modules of use is a web-based program, QuikChek™ that provides a suite of financial self-service applications that students can access without operator intervention. Two of these applications are:

- **ACH-Direct Deposit**
- *ui-pay*

What is ACH?

Automated Clearing House (ACH) is an electronic method of transferring credits and debits between financial institutions more commonly known as Direct Deposit.

What is *ui-pay*?

ui-pay is a web-based payment method for students to pay their student account bills over the Web using a credit card, debit card, or electronic check from a checking or savings account.

In addition to making payments, students may also:

- **View their online account history, and**
- **Authorize other individuals, such as parents or guardians, to view their bill and pay all or part of the balance due.**

E-commerce Industry Standard Practices

For e-commerce the University utilizes:

- E-commerce industry standard practices such as: data encryption, firewalls, and strong software and physical security
- Banking standards for data transmission to the bank

Software supplier infiNET Solutions is prepared to support the banking industry's IFX standard for these applications

*infi***NET**
 *Solutions*
*Make the Connection*TM

www.infinet-inc.com

Web Services – What are they?

- Modular software components wrapped inside a specific set of Internet communication protocols
- The Web Service Promise
 - Anyone, anywhere, any time, using any computer system can use them.

Web Services – Protocols

- XML
 - Structured information
- WSDL (Web Services Description Language)
 - Describes the Web Service
- UDDI (Universal Description, Discovery and Integration)
 - Searchable directory of Web Services
- SOAP (Simple Object Access Protocol)
 - Underlying protocol

SAML – The Security Solution

- SAML
 - Security Assertion Markup Language
 - An XML based standard for authentication and authorization
- SAML is being driven by OASIS
(Organization for the Advancement of Structured Information Standards)

Making it all work

- *infiNET Solutions* has partnered with JA-SIG to pilot Web Services and SAML on the Boston College campus
- These technologies are powerful, however they require the appropriate planning and architecting

Standards in Distance Education

S

May 10, 2002

Les Smith, SCT

lsmith@sct.com

SCT Use of IMS Enterprise Spec

■ America's Learning Exchange

SCT produces an XML extract file of *Course Catalog data* to the U.S. Department of Labor to support the American's Learning Exchange (ALX project)

■ WebCT Campus Edition

SCT produces XML extract files and xml event messages (for real-time transmission) to synchronize data with the WebCT 3.5 Campus Edition.

WebCT produces XML event message which are sent to the SCT administrative system to post grades

JISC recommends Web services messages to integrate administrative systems and virtual learning environment

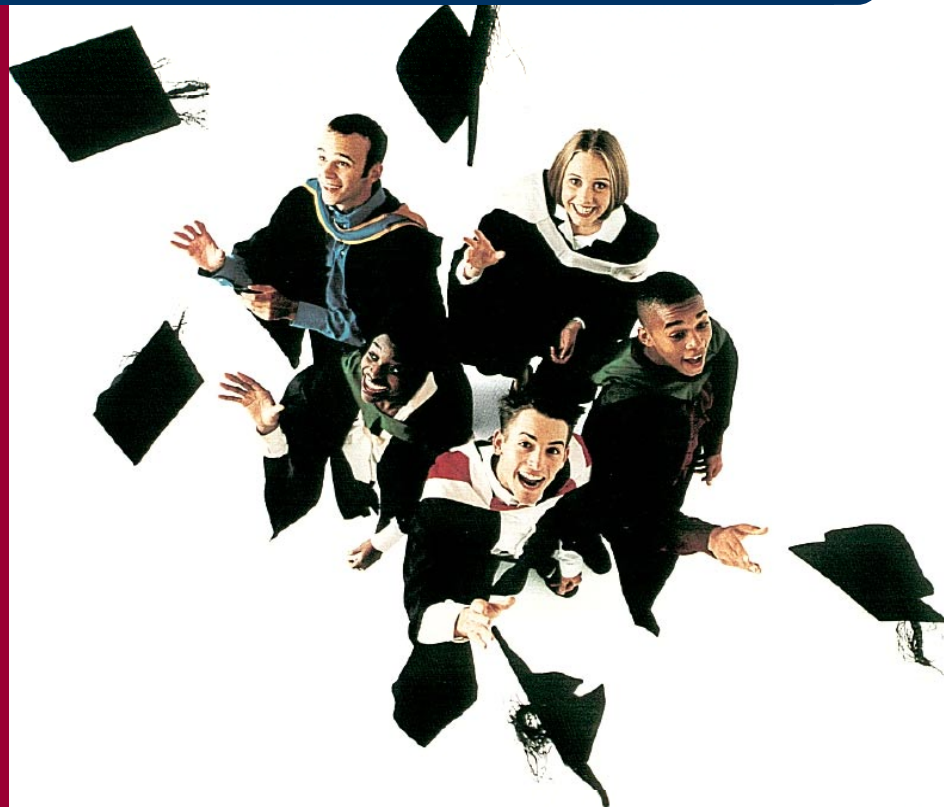
NCHELP Collaborations

Tim Cameron

NCHELP

Adele Marsh

*American Education
Services*





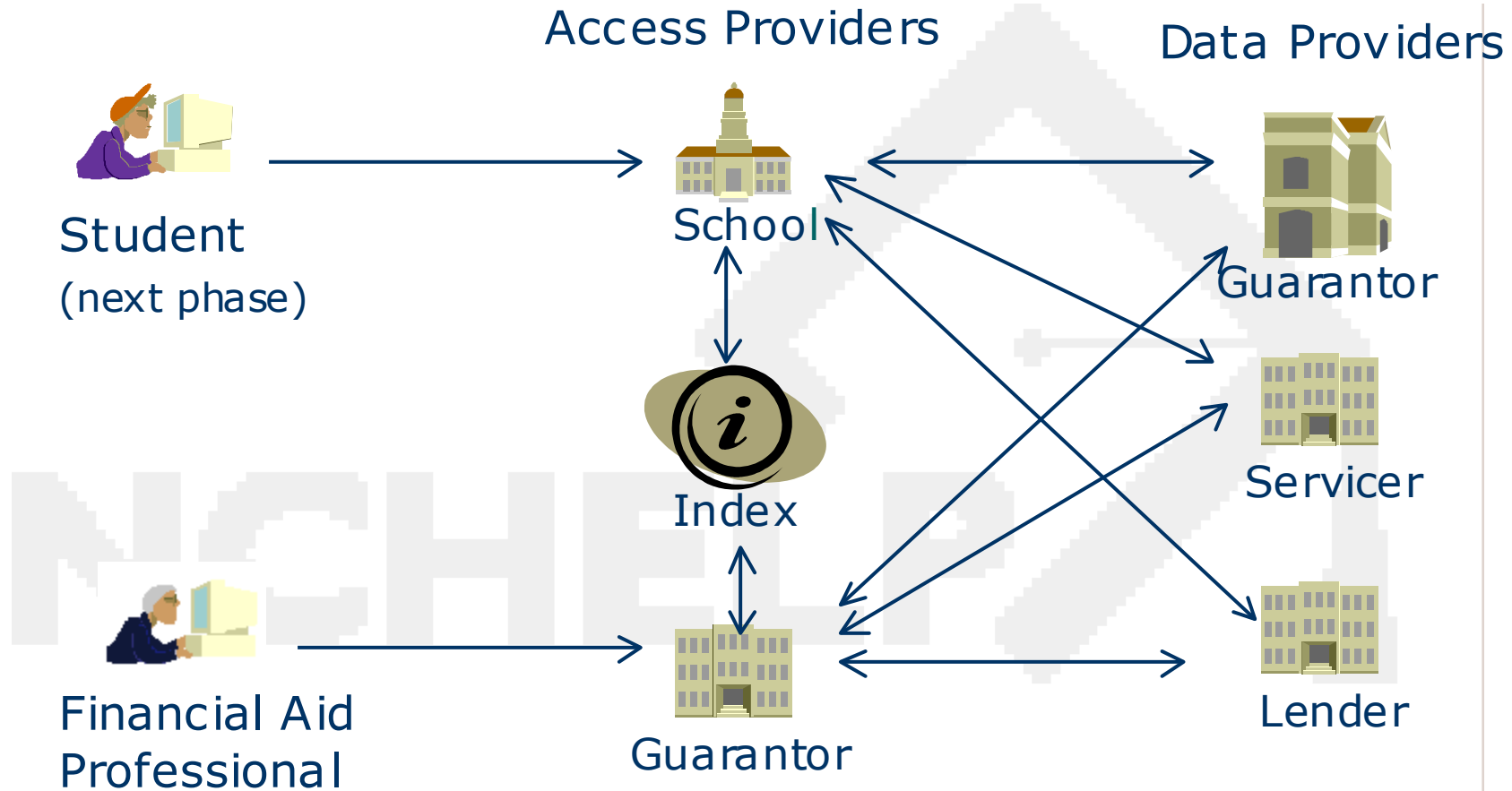
The High Performance Channel

- Transmits Data over HTTPS
 - Simple Object Access Protocol (SOAP)
 - Server-side and Client-side Software Components
- Real-Time Internet Based Processing
- Available Under the GPL

Forthcoming Version 2 is expected to implement Web services standards not available when Version 1 was developed.



Simplified Meteor Illustration



*California eTranscript
Prototype*

e-Transcript: User Login


uPortal by J A-S I G

Welcome Guest - Please Login:

Name: Password:

 uportal
by JASIG

Get Student List



im+m eTranscript

California Colleges Transcript Demo

Welcome to the California Community College transcript exchange service. This service will immediately retrieve an unofficial transcript from any California Community College ETPP-compliant site. Some colleges provide electronic access about three days after a request. The transcript will be available for approximately ten days. This service may also be used to order official and unofficial transcripts.

Please Enter a last name and additional information that may identify the student. Only students with exact matches with entered data will be listed.

Select Student

Last Name: [Required]
First Name:
Middle Name:
Social Security Number:
Date of Birth:
Request from:

Powered by uPortal 2.0

Select Student from List

uportal
by JASIG

im+m eTranscript

California Colleges Transcript Demo

Below is a list of students that match your search criteria. Please (1) select a student from the list below then (2) click the appropriate button at the end of the list to either view an unofficial transcript online, or order an official transcript.

Student List [+ Show Details](#)

-  **Smart, John M**
Birthdate: 1971-01-01
SSN: 992-87-7747
-  **Smart, John**
Birthdate: 1971-01-01
SSN: 992-87-7747

Powered by uPortal 2.0

Select Transcript View



im+m eTranscript

California Colleges Transcript Demo

There are two ways to view a transcript: Select a preformatted transcript, or build a custom view of only the information that you want.



Student
John M Smart
Date of Birth: 1971-01-01
SSN: 992-87-7747

Select a View

-  **Student View**
Description: A view containing useful information for students wanting to review their transcript
-  **IGETC**
Description: The IGETC view
-  **PDF Page view [not available at this time]**
Description: A printable, letter size version of the transcript. This view requires Adobe Acrobat Reader software.

View Transcript Cancel

eTranscript



im+m eTranscript

California Colleges Transcript Demo

Unofficial Transcript of Academic Record

Student
John M Smart
Date of Birth: 1971-01-01
SSN: 992-87-7747
Major: Computer Science

Receipient
Kaiser Steel Corporation
Human Resources
Attn: Human Resources
400 Railroad Street
Yarmouth, CA 94023

Issuing Institution
Alpha College
413 College Drive
Yarmouth, CA 94023



Coursework at Alpha College

Fall 1991

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
ENG 1A	English Comp/Read	3.00	3.00	A	12.00
HLTH 1	Health Education	3.00	3.00	A	12.00
PHY 2	Desc College PhysicEnglish comp? Read	3.00	3.00	C	6.00
POLS 50	Student Leadership	2.00	0.00	W	0.00
SOC 1	Intro To SociologyEnglish	3.00	3.00	B	9.00
SPEE 1	Elem of Publ Speak	3.00	3.00	B	9.00
Totals		17.00	15.00		48.00

Fall 1991 Grade Point Average: 3.20

Spring 1992

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BOL 11	Human Sexuality	3.00	3.00	A	12.00
HIST 2A	U.S. History	3.00	3.00	A	12.00
POLS 1	Am Political Instit	3.00	3.00	C	6.00
PSY 1	Intro To Psychology	3.00	3.00	A	12.00
Totals		12.00	13.00		42.00

Spring 1992 Grade Point Average: 3.50

Fall 1993

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
CS 1	Intro To Computers	3.00	0.00	W	0.00
Totals		3.00	0.00		0.00

Fall 1993 Grade Point Average: 0.00

Spring 1995

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HST 1B	Western Civilization	3.00	0.00	F	0.00
PHYE 46	Tai Ji Quan	0.50	0.50	B	1.50
PHYE 46	Tai Ji Quan	0.50	0.50	D	0.50
Totals		1.00	1.00		2.00

Spring 1995 Grade Point Average: 2.00

Summer 1996

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
PSYC 3	Personal Psychology	3.00	3.00	A	12.00
Totals		3.00	3.00		12.00

Summer 1996 Grade Point Average: 4.00

Coursework at Alpha College

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HIST 1A	Survey of Western Civilization	3.00	3.00	A	12.00
HUMA 5	Multi-Cultural Mythology	3.00	3.00	A	12.00
PSYC 2	Develop Psychology	3.00	3.00	A	12.00
PSYC 5	Intro Career/Life Planning	3.00	3.00	A	12.00
SPAN 1A	Beginning Spanish	4.00	4.00	A	16.00
Totals		16.00	16.00		64.00

Fall 1996 Grade Point Average: 4.00

Coursework at Alpha College

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
BIOL 2	Concepts in Biology	4.00	4.00	B	12.00
ENGL 1B	Introduction to Literature	3.00	3.00	A	12.00
ENGL 1C	Critical Thinking and Comp	3.00	3.00	A	12.00
MATH 3	College Algebra	3.00	3.00	A	12.00
SPAN 1B	Elementary Spanish	4.00	4.00	A	16.00
Totals		17.00	17.00		64.00

Spring 1997 Grade Point Average: 3.76

Transcript Totals

Description	Attempted Credits	Earned Credits	Grade Points	GPA
Total Institution		64.00	64.00	3.62
Total Transfer		0.00	0.00	0.00
Overall		64.00	64.00	3.62

Or Build Custom View

Build a View



Custom View

Description: Select the checkboxes below to build a custom view of the requested transcript data.

- Institution and transcript information [required]**
Institution name, Address, ID, Transcript type, etc.
- Student information [required]**
Name, Date of Birth, Student ID, etc.
- Intersegmental Institutions Information**
High School Attended, CSU GE Completion, CSU IGETC Completion, etc.
- Transfer/Military/Test Credits Awarded**
Subjects, Courses, Total credits, etc.
- Coursework at Alpha College**
Detailed view of Courses, Units, Grades, GPA, etc.
- Transcript Totals**
Consolidated view of Units Attempted, Earned, Grade Points, GPA, etc.
- Grading and Notation Legends and Notes**
Detailed descriptions of Grades, Codes, and Notes, etc.

View Transcript

Cancel

Get Transcript

 **im+m eTranscript**

California Colleges Transcript Demo  

Unofficial Transcript of Academic Record 

Student John M Smart Date of Birth: 1971-01-01 SSN: 992-87-7747 Major: Computer Science	Receipient Kaiser Steel Corporation Human Resources Attn: Human Resources 400 Railroad Street Yarmouth, CA 94023	Issuing Institution Alpha College 413 College Drive Yarmouth, CA 94023
--	--	--

Coursework at Alpha College

Fall 1991

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
ENG 1A	English Comp/Read	3.00	3.00	A	12.00
HLTH 1	Health Education	3.00	3.00	A	12.00
PHY 2	Desc College PhysicEnglish comp? Read	3.00	3.00	C	6.00
POLS 50	Student Leadership	2.00	0.00	W	0.00
SOC 1	Intro To SociologyEnglish	3.00	3.00	B	9.00
SPEE 1	Elem of Publ Speak	3.00	3.00	B	9.00
Totals		17.00	15.00		48.00

Fall 1991 Grade Point Average: 3.20

Spring 1992

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
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HIST 2A	U.S. History	3.00	3.00	A	12.00
POLS 1	Am Political Instit	3.00	3.00	C	6.00
PSY 1	Intro To Psychology	3.00	3.00	A	12.00
Totals		12.00	13.00		42.00

Spring 1992 Grade Point Average: 3.50

Fall 1993

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
CS 1	Intro To Computers	3.00	0.00	W	0.00
Totals		3.00	0.00		0.00

Fall 1993 Grade Point Average: 0.00

Spring 1995

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
HST 1B	Western Civilization	3.00	0.00	F	0.00
PHYE 46	Tai Ji Quan	0.50	0.50	B	1.50
PHYE 46	Tai Ji Quan	0.50	0.50	D	0.50
Totals		1.00	1.00		2.00

Spring 1995 Grade Point Average: 2.00

Summer 1996

Course Subject/No.	Course Title	Attempted Credits	Earned Credits	Grade	Grade Points
PSYC 3	Personal Psychology	3.00	3.00	A	12.00
Totals		3.00	3.00		12.00

Summer 1996 Grade Point Average: 4.00

Course Subject/No. Course Title Attempted Credits Earned Credits Grade Grade Points

HIST 1A	Survey of Western Civilization	3.00	3.00	A	12.00
HUMA 5	Multi-Cultural Mythology	3.00	3.00	A	12.00
PSYC 2	Develop Psychology	3.00	3.00	A	12.00
PSYC 5	Intro Career/Life Planning	3.00	3.00	A	12.00
SPAN 1A	Beginning Spanish	4.00	4.00	A	16.00
Totals		16.00	16.00		64.00

Fall 1996 Grade Point Average: 4.00

Course Subject/No. Course Title Attempted Credits Earned Credits Grade Grade Points

BIOL 2	Concepts in Biology	4.00	4.00	B	12.00
ENGL 1B	Introduction to Literature	3.00	3.00	A	12.00
ENGL 1C	Critical Thinking and Comp	3.00	3.00	A	12.00
MATH 3	College Algebra	3.00	3.00	A	12.00
SPAN 1B	Elementary Spanish	4.00	4.00	A	16.00
Totals		17.00	17.00		64.00

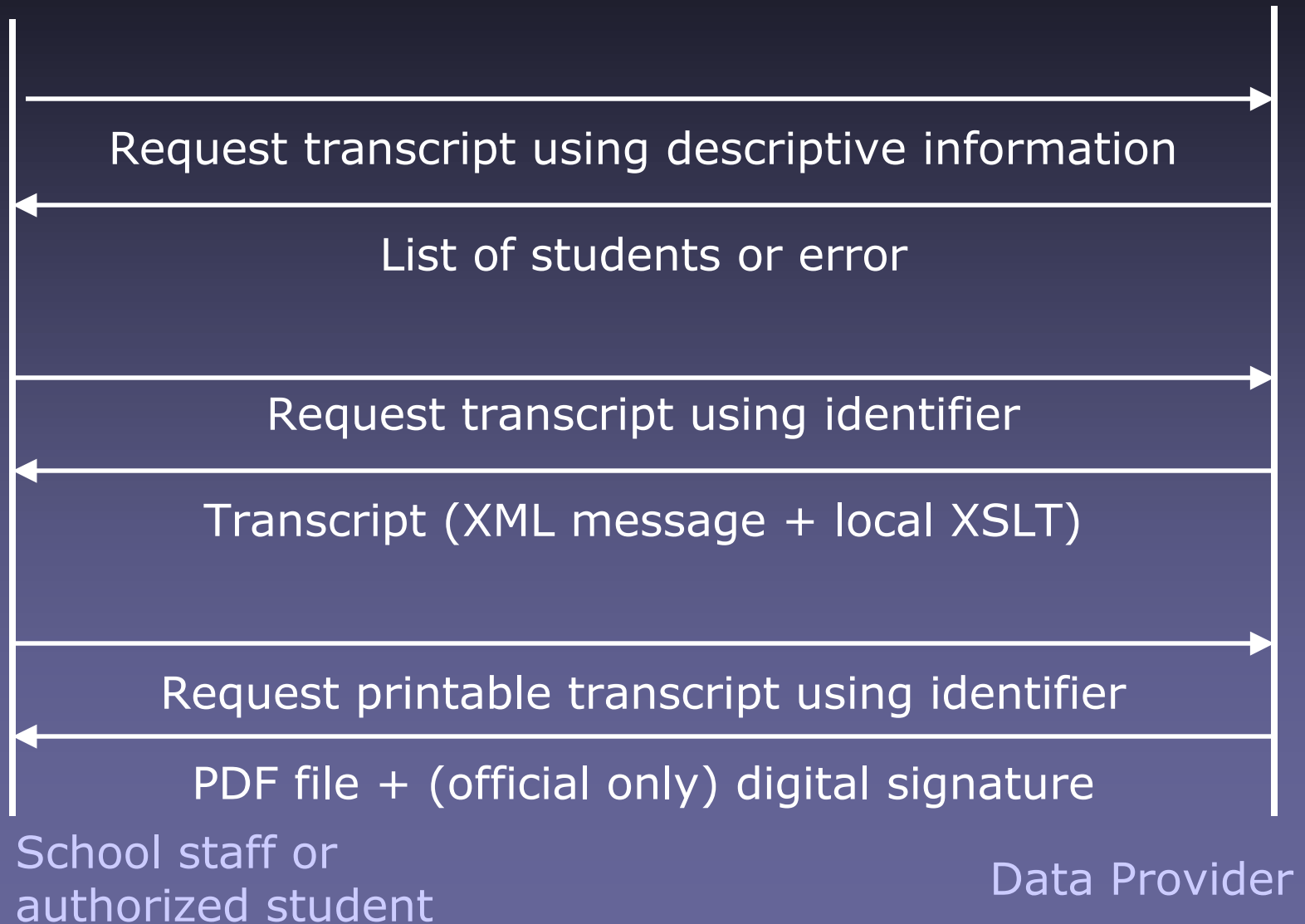
Spring 1997 Grade Point Average: 3.76

Transcript Totals

Description	Attempted Credits	Earned Credits	Grade Points	GPA
Total Institution		64.00	64.00	3.62
Total Transfer		0.00	0.00	0.00
Overall		64.00	64.00	3.62

Prototype protocol

JA-SIG Collaborative



SOAP message format

As proposed HTTPS

WS-Security
SAML Assertions

XML Transcript
With California
extension

Header

Body

With SMTP

WS-Routing
WS-Reliability
WS-Security
SAML Assertions
XML Encryption

XML Transcript
With California
extension
XML Encryption

Beyond the prototype

- Field test the XML specification
- Validate business functions, protocol, user interface, and security
- Develop logging practices
- Develop minimal public key infrastructure
- *Potentially develop directory of participants (WSDL + UDDI)*
- *Develop billing/payments for transcript services*
- *Interoperate with the University of Texas, Austin Internet Server*



The Meteor Prototype

The Meteor channel

The screenshot displays the uPortal interface. On the left is a navigation menu with the following items:

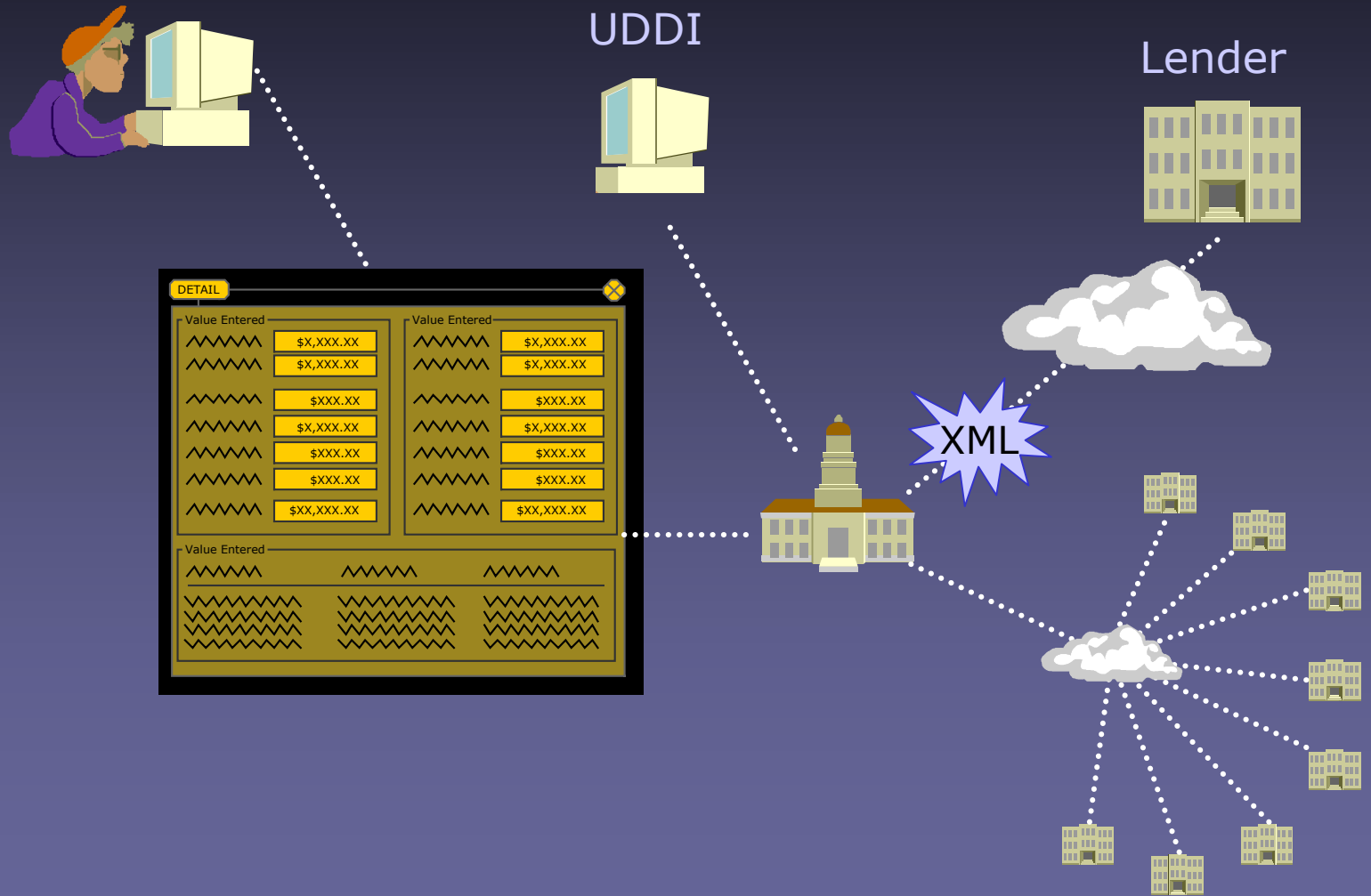
- MAIN
 - MozillaZine
 - StockCharts.com
 - Bookmarks
 - XML.com
- STUDENT FINANCIAL AID**
 - Meteor
- FIN AID PROFESSIONAL
 - Meteor
- OTHER
 - uPortal-Powered Sites
 - IBS News
 - uPortal Developers Reference
 - Salon.com
 - telnet

The main content area is titled "THE METEOR PROJECT" and features a "Meteor" channel window. This window contains the following information:

- George Likens 158482387
-  Oklahoma Student Loan Authority
[More information]
-  Federal Direct Loan Servicing Center, Utica
[More information]
- Return

At the bottom of the channel window is the "THE METEOR PROJECT" logo. In the top right corner of the channel window, there is a "National Student Clearinghouse" logo and a set of standard browser window control icons.

Meteor in a nutshell..



Data from multiple sources, locations

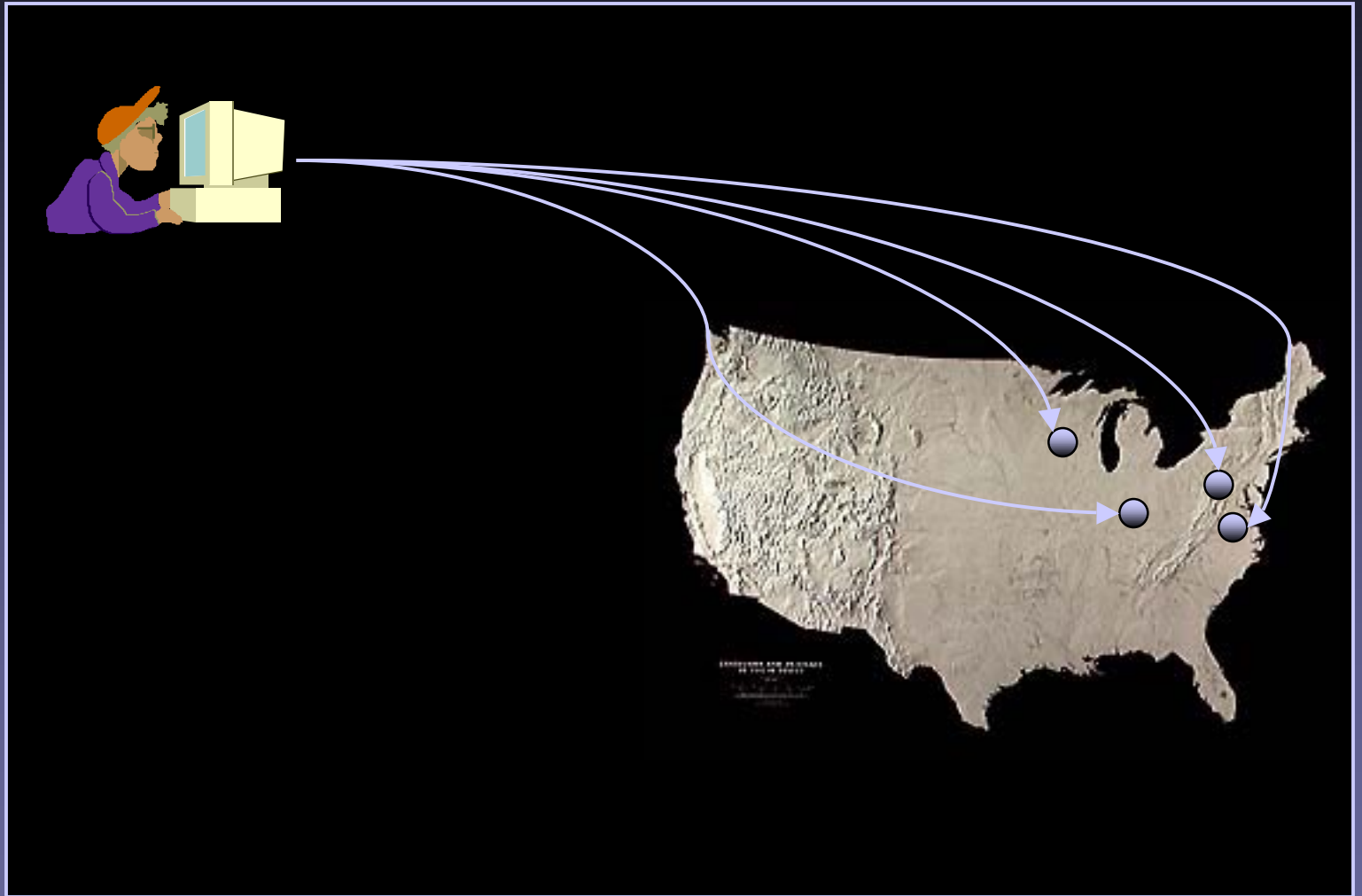
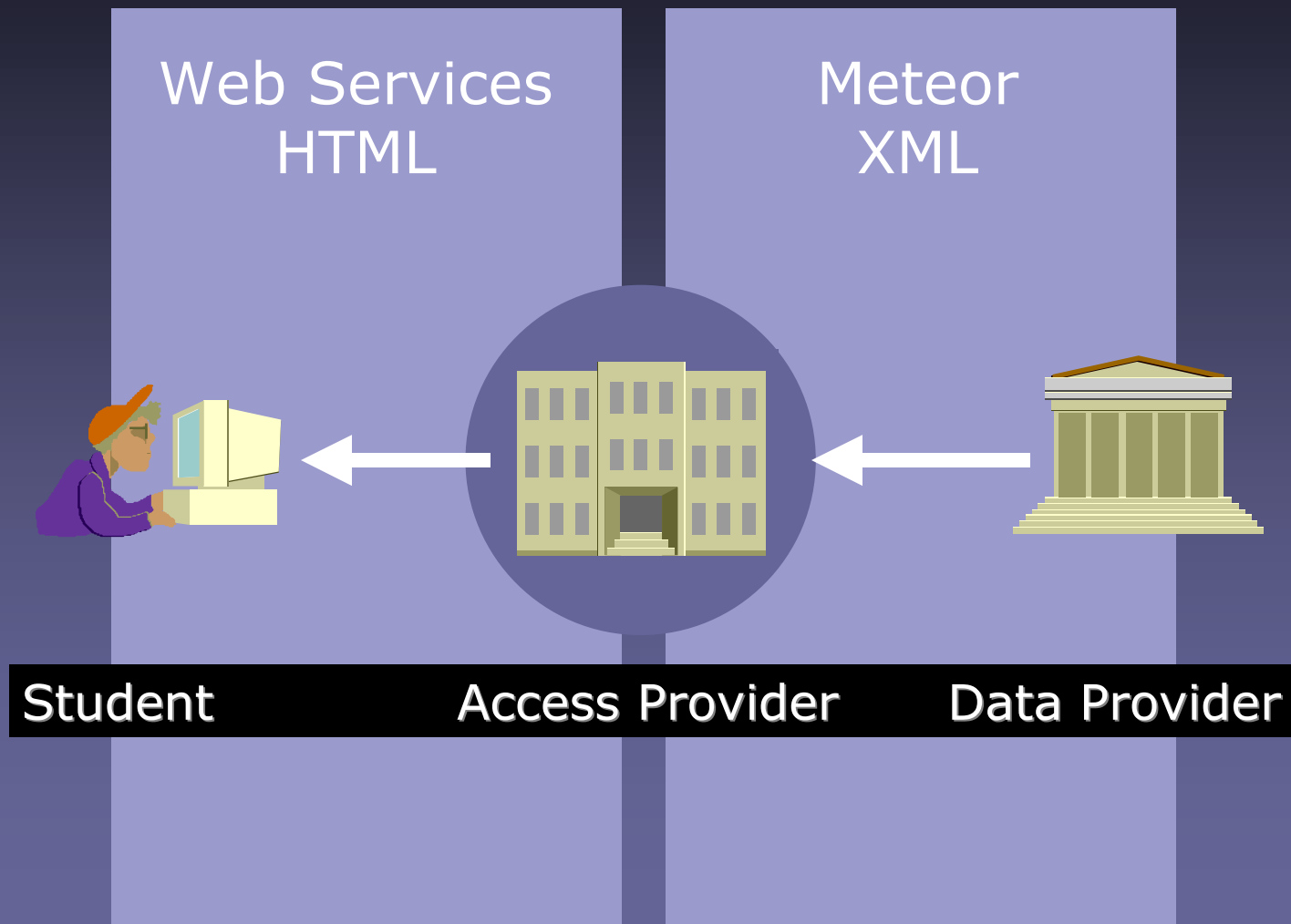
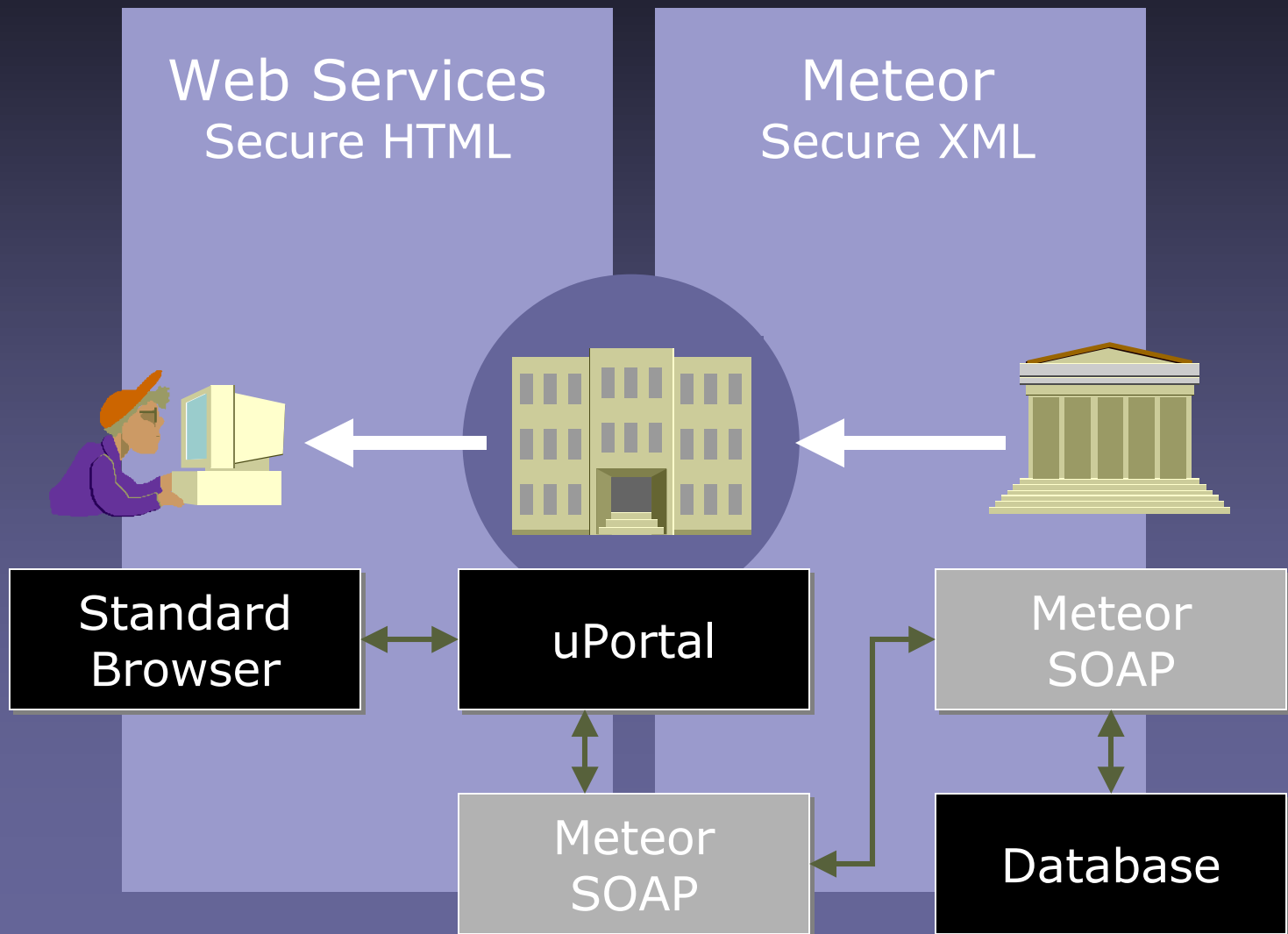


Diagram of Meteor Concept



As implemented ...



Meteor Channel in the uPortal

The screenshot displays the uPortal interface with a left-hand navigation menu and a main content area. The navigation menu includes categories like MAIN, STUDENT FINANCIAL AID, FIN AID PROFESSIONAL, and OTHER, with 'Meteor' listed under each. The main content area features the 'THE METEOR PROJECT' logo, a 'Meteor' header, and a list of links including 'George Likens 158482387', 'Oklahoma Student Loan Authority', and 'Federal Direct Loan Servicing Center, Utica'. A 'Return' button is also visible.

uportal
by JASIG

- MAIN
 - MozillaZine
 - StockCharts.com
 - Bookmarks
 - XML.com
- STUDENT FINANCIAL AID**
 - Meteor
- FIN AID PROFESSIONAL**
 - Meteor
- OTHER**
 - uPortal-Powered Sites
 - IBS News
 - uPortal Developers Reference
 - Salon.com
 - telnet

THE METEOR PROJECT

Meteor

National Student Clearinghouse

George Likens 158482387

Oklahoma Student Loan Authority
[More information]

Federal Direct Loan Servicing Center, Utica
[More information]

Return

THE METEOR PROJECT

*Current Meteor Deployment
for financial aid professionals*



Meteor Query

Student SSN:

By submitting this inquiry to the Meteor Network, you are certifying that you are a financial aid professional (or are acting on behalf of a financial aid professional) and that you have authority to view information on the Meteor Network. You also are certifying that the information you access relates only to a student applicant, a current student, or a former student of the educational institution on whose behalf you are working. Use of the Meteor Network in violation of any of these certifications constitutes misrepresentation and will be considered a fraudulent act.



Borrower Award Summary

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Default Details](#) | [Enter New SSN](#)

Total Guaranteed Amount:	\$4,949.00
Total Repaid Principal:	\$0.00
Total Capitalized Interest:	\$0.00

Award Information

#	Borrower's Name	Loan Status	Award Type	Guaranteed Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
1	<u>Terry H SwissCheese</u>	RP	FFELPLUS	\$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA *
Total				\$4,949.00						

* - Denotes source of data.



Award Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Award Details](#) | [Disbursements](#) | [Repayment Details](#) | [References](#) | [Default Details](#) | [Enter New SSN](#)

Borrower Information

Permanent Address: 432 IOU Lane
YouBet, IA 87645-8432

Primary Phone: 501-456-8765
E-mail Address: terry_swisscheese@beoing.com

Address Validated:
Address Validated Date:

Drivers License:
Driver's License State:

Award Details

Data Provider Type: Guaranty Agency

CLUID: Not Available

Graduation Date:

Award Type: FFELPLUS

Award Amount: \$4,949.00

Repaid Principal: \$3,654.01

Capitalized Interest: \$2,745.90

Award Begin Date: 1988-08-20

Award End Date: 1989-05-21

Grade Level: 4

Award Status: RP

Award Status Date: 1990-11-19

MPN:

E-Signature: false

CommonLine Error:

Guaranteed Date: 1988-07-07



Disbursements

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Award Details](#) | [Disbursements](#) | [Repayment Details](#) | [References](#) | [Default Details](#) | [Enter New SSN](#)

Award Information

Award Type	Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
FFELPLUS	\$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA

Disbursements

Sequence Number: 1
 Disbursement Date: 1988-08-08
 Net Amount: \$1,920.00
 Status Code: D
 Status Date: 1988-08-09
 Disbursement on Hold:
 Sequence Number: 2
 Disbursement Date: 1988-12-22
 Net Amount: \$1,920.00
 Status Code: D
 Status Date: 1986-12-23
 Disbursement on Hold:



Repayment Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Award Details](#) | [Disbursements](#) | [Repayment Details](#) | [References](#) | [Default Details](#) | [Enter New SSN](#)

Award Information

Loan Status	Award Type	Award Amount	Begin Date	End Date	School	Lender	Servicer	Guarantor
RP	FFELPLUS	\$4,949.00	1988-08-20	1989-05-21	Learning For You	Lending For You	Servicing For You	Little GA

Repayment Details

Loan Status Date 1990-11-19

Account Balance \$565.98
Current Interest Rate 8.00%

Payment Plan
Next Payment Due \$145.22

Payment Begin Date 1989-11-20
Next Payment Due Date 2002-03-15

Previous Payments

Payment Amount	Payment Date
No payments found	

Send Payments To

Servicing For You (ID: 809547)
501-458-7273
Address: 924 Servicing Way
Salt Lake City, UT 84054

Email: whatdoyouneed@sfy.com
Web: www.servicingforyou@sfy.com



References

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Award Details](#) | [Disbursements](#) | [Repayment Details](#) | [References](#) | [Default Details](#) | [Enter New SSN](#)

References

Uncle Bob T SwissCheese
Primary Phone: 405-209-8753
Address: 5468 HWY 90
Iowa City Hills, IA 43567
Email:



Borrower Default Information

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#) | [Default Details](#) | [Enter New SSN](#)

Default Details

Data Provider	Default	Satis. Payment Arrangements	Default Aversion Requested	Requested Date	Requested Cure	Requested Cure Date	Claim Filed	Claim Filed Date	Claim Paid	Claim Paid Date
Test Guarantor 1	true	false	false		false		true	1998-12-01	true	1999-01-01

Little GA (ID: 606)
 Primary Phone: 501-564-8439
 Address: 34 Andover Court
 Salisaw, OK 75932

Email: guarantees@lga.org
 Web: www.littlega.lga.org



Entity Details

Borrower Name: Terry H. SwissCheese • 315-15-0315

[Award Summary](#)

Entity Details

Little GA (ID: 606)
Primary Phone: 501-564-8439
Address: 34 Andover Court
Salisaw, OK 75932

Email: guarantees@lga.org
Web: www.littlega.lga.org

Emerging Enterprise Architecture

Enterprise Information Services



Portal
Interface

Directory

Authentication

Authorization

Administration (ERP)

Virtual Learning Environment
(Learning Management System)

Library

Enterprise Information Standards

JA-SIG Collaborative

WSRP, WSUI, RSS



**Portal
Interface**

Directory

Authentication

Authorization

EduPerson, HR-XML

DSML

SAML

Administration (ERP)

**HR-XML,
PESC**

Virtual Learning Environment
(Learning Management System)

Library

NISO

IMS

XML/SOAP/XSLT Architecture

- The XML content is delivered to the portal as a SOAP message
- and portal-based XSL stylesheet transformations are used to develop the XHTML used for presentation.

The user's role can be used by the portlet (channel) to select the appropriate XSLT and presentation for that class of user.

Application/Portal Interface

	Technology	Presentation	Processing
SOAP/XSLT	Web Services	Local adaption	Application Server
WSRP	Web Services	As authored w/local style	Application Server
HTML	HTML via CWebProxy	Similar to authored	Web Server
iChannel	Java	As authored	Portal

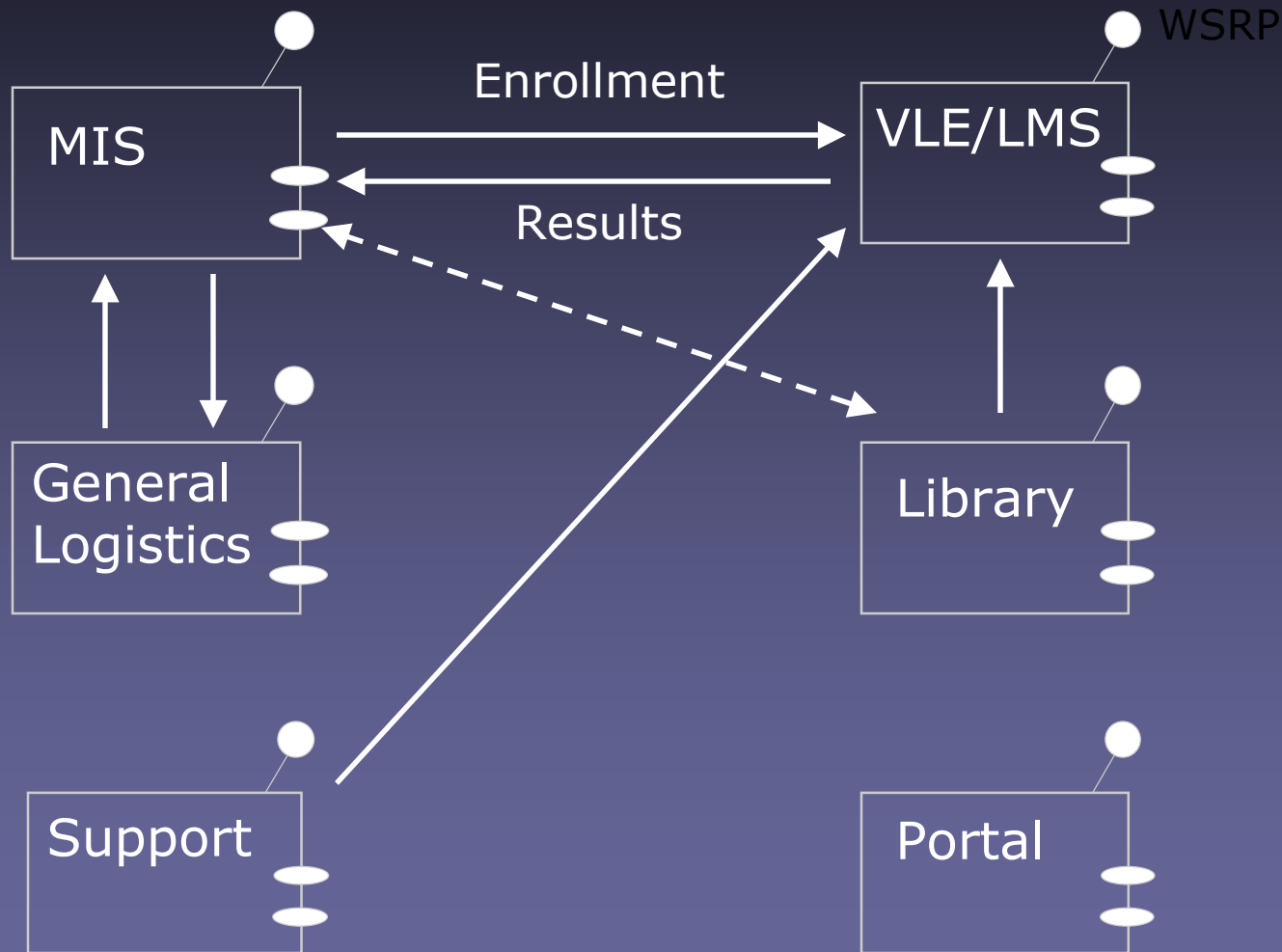
Comparative Characteristics

	Presentation				Legacy Web Compatibility	Portal Load	Portal Code
	Flexibility	Languages	Localization	Control			
SOAP/XSLT	√	√	√			Low	Stylesheets
WSRP				√		Low	None
HTML via CWebProxy					√	Depends	CWebProxy
iChannel				√		High	Application+ Stylesheets?

Preferred Interface

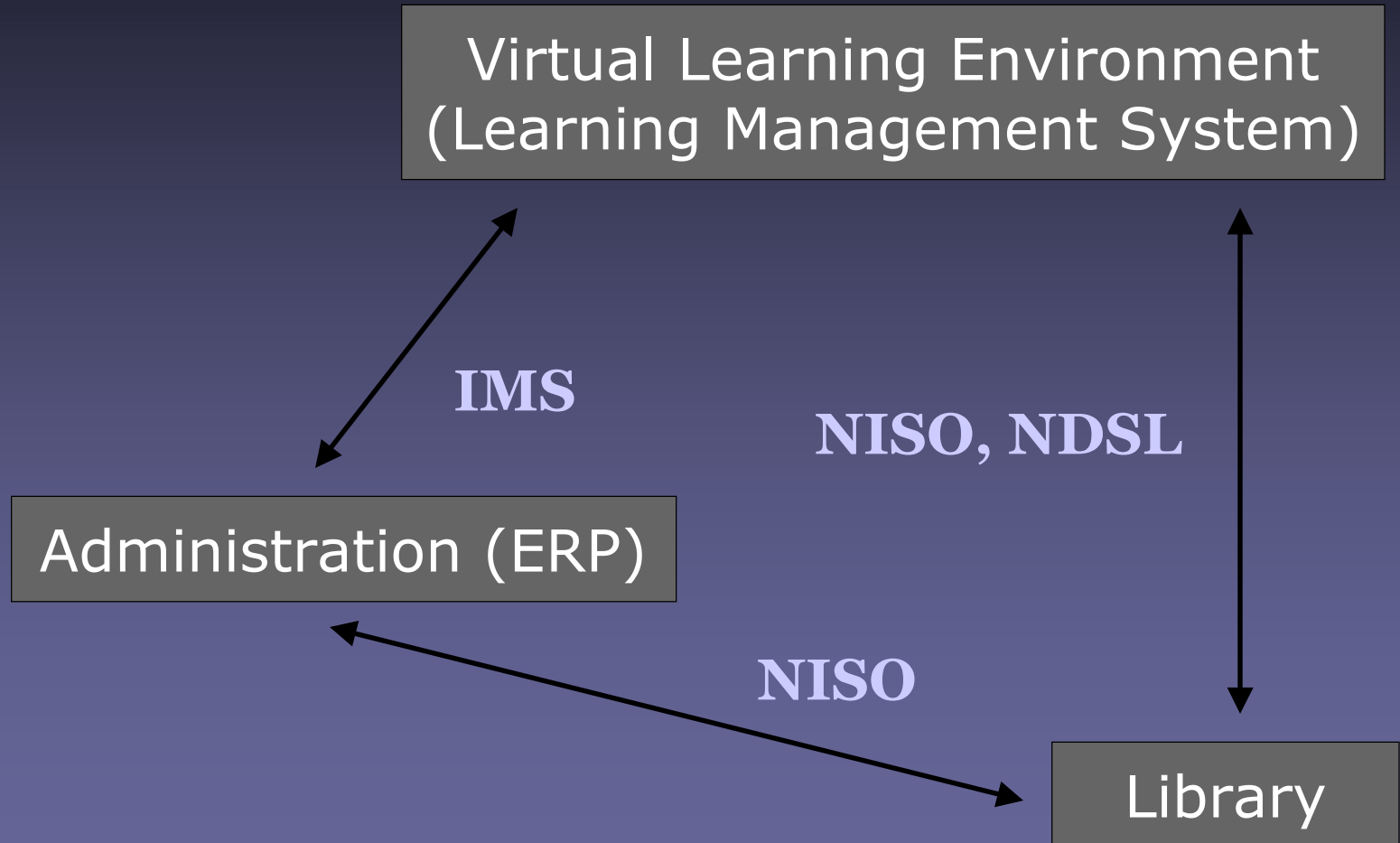
Technology	Typical Use
SOAP/XSLT	Preferred for new applications
WSRP	New applications where portal installation of code or stylesheet is not possible or desirable
HTML	For legacy applications
iChannel	When the application must run under the portal or requires capability not available in WSRP or SOAP/XSLT

Managed Learning Environment

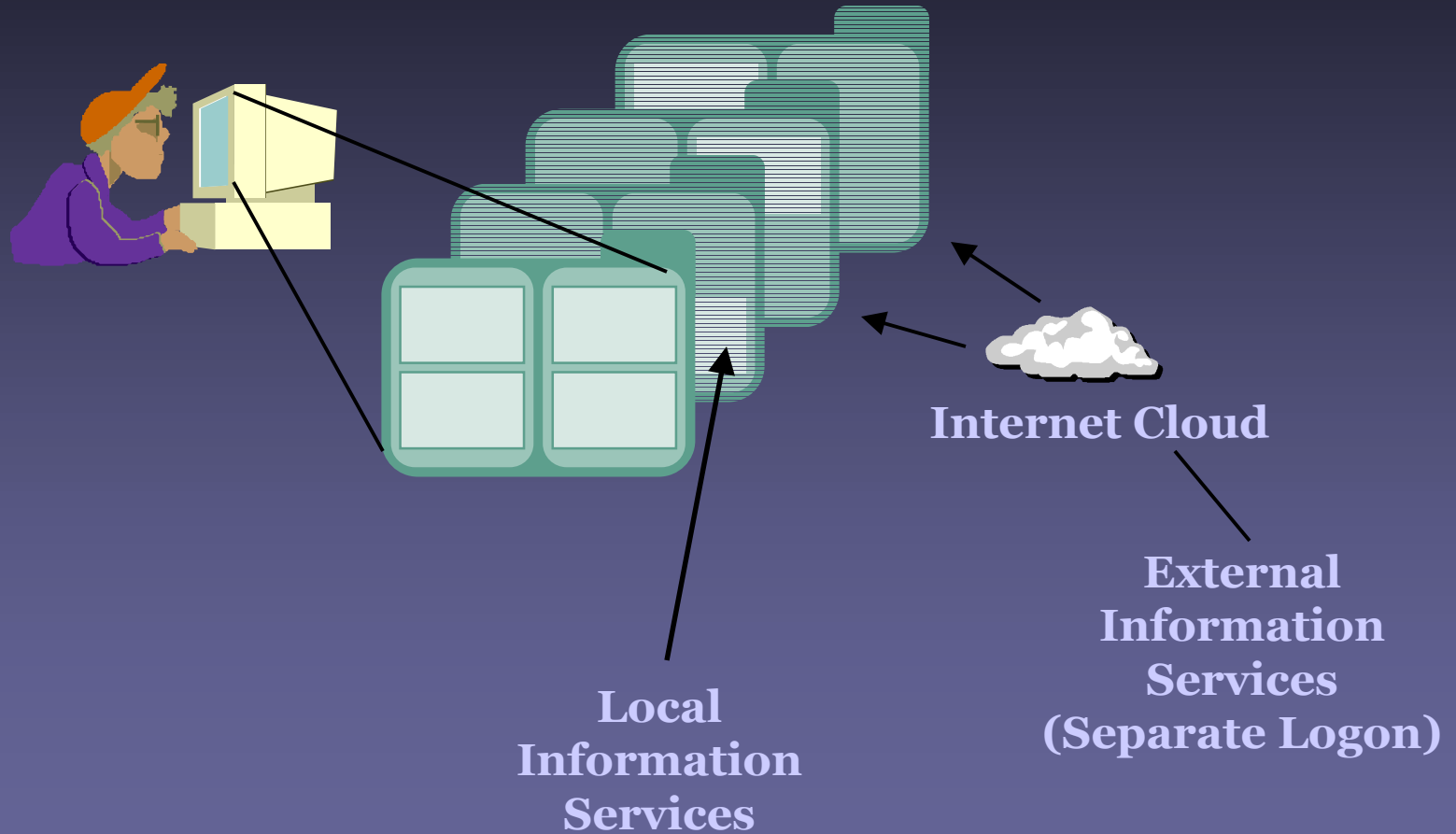


Data Integration Standards

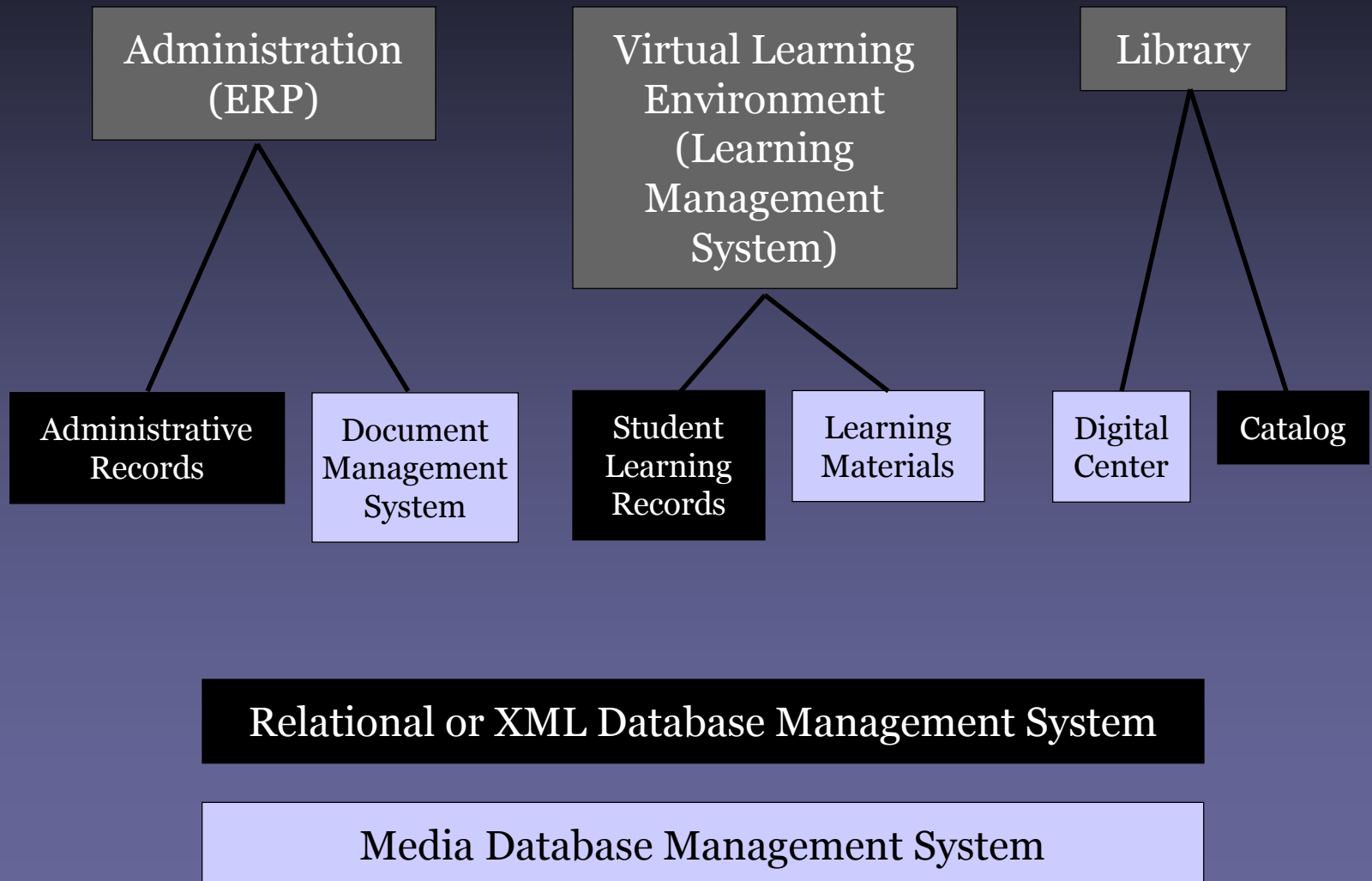
JA-SIG Collaborative



The portal view



Digital repositories



Observations

Higher Education IT: Context

- IT budgets typically reduced 10 to 20% for the second consecutive year.
- Sharp increases in software licenses
- Three new federally mandated systems using different architectures.
- Increasingly heterogeneous hardware/software
- Student expectations driving priorities: portals, wireless, broadband, on-line administrative systems

Directory standards

- EDUCAUSE EduPerson Objects + “Best practices” representations
- Explicit in OASIS xNAL, xAL, xCIL, xCRL
- Implicit in Common Record, SEVIS, Meteor, and CommonLine; PESC transcript and admissions
- Explicit in HR-XML (implementation confirmed by key ERP vendors)
- Implicit in IMS Enterprise
- Implicit in SIF (K-12)

Use of SAML Assertions

- Internet 2 Shibboleth (journal access)
- Meteor (student loan data)
- eTranscript (student records)
- Liberty Alliance (federated authentication)

Shouldn't the assertions be standardized for higher education?

SAML Assertion

```
<?xml version="1.0" ?>
- <SAML>
  <AssertionID>AE0221</AssertionID>
  <Issuer>URN:dns-date:www.CREN.test:2002-05-16:19283</Issuer>
  - <ValidityInterval>
    <NotBefore>2002-05-16T12:34:00Z</NotBefore>
    <NotOnOrAfter>2002-05-16T13:34:00Z</NotOnOrAfter>
  </ValidityInterval>
  - <Conditions>
    <Audience>http://www.CREN.test/school_list.html</Audience>
  </Conditions>
  - <Subject>
    <Account>K4356783</Account>
  </Subject>
  - <Resources>
    <string>http://www.elseviser.com/Journal_X/</string>
    <string>https://www.Alpha College.edu/SIS/</string>
  </Resources>
</SAML>
```

Implementation of PKI

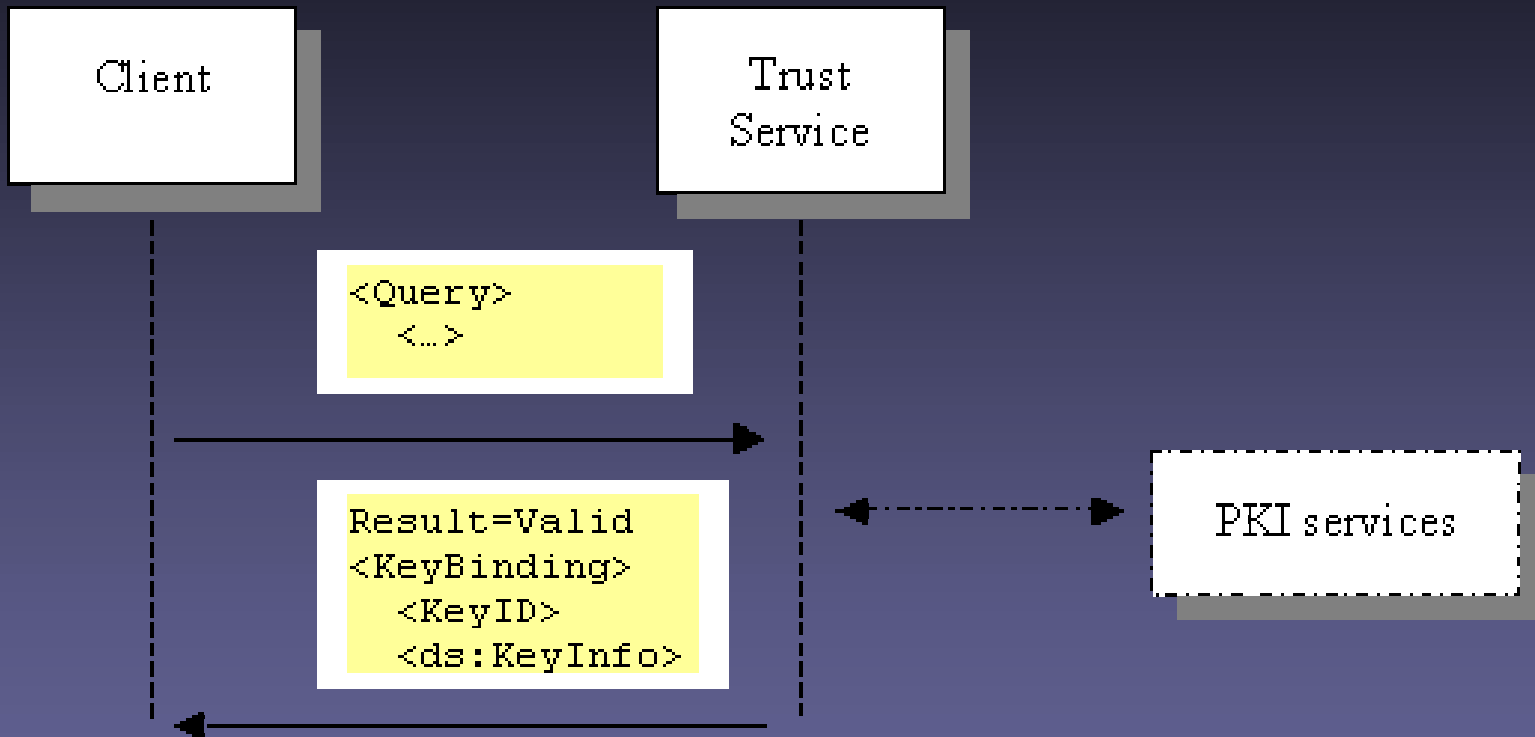
- Use CREN policies and practices, certificate profile for higher education
- Begin with server certificates (HTTPS using IETF TLS/1)
- Use client certificates for offices to sign documents (XML Signature)
- When there is a need, provide digital certificates to students

Certificate Validation: XKMS

- The X-KISS specification defines a protocol for a *Trust service* that resolves public key information contained in XML-SIG elements. ... The underlying PKI may be based upon ... X.509/PKIX, SPKI or PGP.
- The X-KRSS specification defines a protocol for a web service that accepts registration of public key information.
- Both protocols are defined in terms of
 - XML Schema Language
 - (SOAP) v1.1
 - Web Services Definition Language v1.0 [WSDL].

XML Key Management Specification (XKMS 2.0),
W3C Working Draft, March 18, 2002.

XKMS Key Validation



Tier2 Protocol Provides Key Validation Service

The dilemma

- Software developers are isolated from standards efforts.
- There are so many standards; overlap is occurring, the volume of standards documentation exceeds staff capacity to review and use.
- Because of location and priorities, those *implementing* data exchange standards do not have the opportunity to work together.

Summary

- To accommodate .NET and Java communities, Web Services is required for inter-institutional, inter-system communication
- The Web-services standards are now sufficient for implementation.
- Higher education data standards are available for admissions applications, transcripts, and test scores.
- eTranscripts has a tradition of electronic exchanges and infrastructure (University of Texas Internet server)
- The eTranscript application has an immediate return on investment.

Challenge

- The value (volume) of exchanges will increase if the current initiatives can converge on a single standard.
- The implementations must have a common protocol and common standard though additional data can be exchanged between trading partners (e.g. state extensions).
- The challenge:
 - Converged standard
 - Interoperability testing

One approach

- Working groups of developers and implementers
- supplemented by advisors familiar with the standards
- with effective communications
- open to all who are interested
- and with opportunities for interoperability testing.

Why eTranscripts?

- Desire of participants to collaborate
- Experience in exchanging complex data
- Return on investment, especially as demand for academic records increases

The End

Jim Farmer
uPortal Project Administrator
jxf@immagic.com